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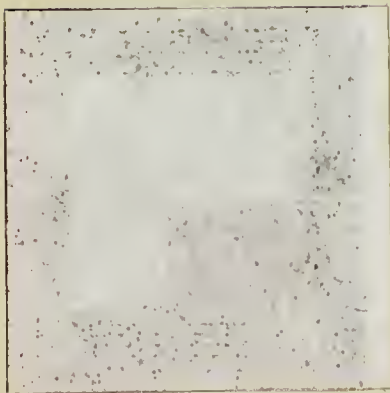
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NURSING MENTAL DISEASES



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NURSING MENTAL DISEASES

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“And last, not least, in each perplexing case
Learn the sweet magic of a cheerful face,
Not always smiling, but at least serene,
When grief and anguish crowd the anxious scene,
Each look, each movement, every word and tone
Should tell the patient you are all his own.
Not the mere artist, purchased to attend
But the warm, ready, self-forgetting friend
Whose genial presence in itself combines
The best of cordials, tonics, anodynes.”

OLIVER WENDELL HOLMES, M.D. 1849.

PREFACE

THIS book makes its appearance in response to many requests that the writer put into more available form the subject matter of her classes with nurses. Mental symptoms in some form and degree are so likely to appear in almost any of the disorders of physical function and are so frequently met in the wards of a general hospital, where too often they are overlooked and misinterpreted by nurses whose training has not included this important study, that many patients are undoubtedly misunderstood and made more miserable and unhappy, and not infrequently in the course of somatic disease grave mental symptoms develop which demand special nursing procedures. It is most desirable that the training in mental nursing be received in a hospital for mental patients, where all types of mental disorders are represented and all grades of symptoms may be noted, and where the larger groups give a more outstanding picture of the various types.

The writer's method has been to precede the course in Mental Diseases with a review of the anatomy and physiology of the nervous system and a brief summary of some of the principles of psychology which explain mental function; to follow each lecture, given by a physician, with a class in which the subject matter of the lecture has been reviewed and the nursing measures applied. Symptoms have been carefully reviewed and emphasized, for, as an eminent physician has said, "While signs are the province of the doctor, symptoms are in a peculiar way that of the nurse" and their observation and recognition are an important part of the nurse's training.

The subject matter of these classes has been derived from many lectures, clinics and staff meetings, and the nursing procedures suggested are those simple measures which a thoughtful nurse can make use of to relieve a patient who is depressed, to quiet a restless and excited one, to arouse one who is indifferent, to manage one who is resistive and quarrelsome, the timely application of which can do much to prevent a more serious condition and consequences.

Acknowledgment is gratefully made to many writers and physicians from whose works and teachings these classes have been made up, and especially to George H. Kirby, M.D., for many suggestions and for the criticism of this manuscript.

HARRIET BAILEY.

BANGOR, MAINE.

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NURSING MENTAL DISEASES

CHAPTER I

PSYCHOLOGICAL INTRODUCTION

As a basis for understanding pathological mental states a knowledge of the physiology of the nervous system and of the principles of psychology which deal with the functions of the mind is necessary. Psychology has, from time immemorial, been briefly defined as "the science of the mind." What is meant by **mind** is so difficult to define that for the purposes of this course it may be said to mean all those thoughts, memories, fancies, feelings, desires, aspirations, decisions, and activities which make up the conscious life of the individual. **Consciousness** is even more difficult to define, and it can best be understood in terms of function, for it is a fact which is common in the experience of all that "consciousness primarily operates in directing our movements and controlling our behavior." Every individual is so constantly adapting himself to his surroundings and environments, or reacting to sensations received from the organs of his own body, that **life** itself becomes a series of adjustments to conditions which are continually changing, situations which from time to time are ever varying, and needs which are always recurring or arising anew and demand new activity or behavior.

This adjustment to changing conditions of environment is made through the **nervous system**, which, as has already been learned, is that part of the body which through countless ages of evolution has developed the particular function of adapting the different organs of the body to their environment and the organism as a whole to the world about it.

Space does not permit of full discussion of the anatomy and physiology of the nervous system in these pages. In earlier courses these subjects have been studied and the knowledge then gained must now be augmented and applied.

All adjustments are made by a mechanism of interconnecting neurons. It has been estimated that there are countless millions of these cells and their fibres overspreading the cortex and lying within the central nervous system, apparently crowded together in great confusion, but in reality arranged or grouped in most perfect systems each with different functions, so that to-day physiologists are able to locate definitely certain areas of the cortex as the sensory area, the motor area, the association areas, the centres for sight, hearing, speech, etc. These different areas are closely connected with each other by the fibres of the cells of which they are composed, and although these fibres are not anatomically continuous, and communicate by contact only, it is believed that impulses pass from the cells of one group to those of another. Microscopic anatomy has shown that at birth there are in definite areas of the cortex certain cells whose fibres are insulated with a sheath, the function of which, it is believed, is to prevent the dissemination of impulses which pass along these fibres, so that they may with undiminished force pass to the appropriate connecting fibre. During the early months of life fibres of other cells in other areas develop sheaths, the growth of which has been noted to be coincident with the increase in the number and intricacy of the bodily movements. Upon these anatomical findings is based the theory of association. It has been further shown that as the intellectual activities increase and the person passes from one experience to another there is a steady increase of these association paths, which is believed to continue up to the time of maturity. In man there are an almost infinite number of connecting or associating fibres, which bring all parts of the nervous system into relation and permit an almost endless number and variety of connections and associations which make possible the ready, diversified,

complex, and intricate movement and activities demanded by social conditions.

Under normal conditions these nerve cells function in perfect harmony, but various factors, like infections, alcohol, drugs, sickness, trauma, fatigue, and mental weakness or defect, tend to upset or impair this harmonious action by increasing the irritability of the nervous system and lowering the resistance of all paths, so that nerve impulses initiated by stimuli which ordinarily would result in definite, well-ordered behavior are not confined to their usual pathways, but become disseminated to other pathways and produce a disordered behavior. This is especially obvious during convulsions, when all the muscles are contracting in a purposeless, disconnected manner.

The mechanism by which adjustments are made is briefly this: Impressions or stimuli, a sound, a word, a color, a look, a touch, heat or cold, a taste, a smell, are continually being picked up or received by the specialized nerve endings of the various sense organs. The impression so received is transformed into an impulse, which is transmitted or conducted by the nerve fibre to the appropriate cells in the cortex, where it comes into consciousness, its meaning is interpreted in the light of past experience (**perception**), and it is transferred or passed along to a particular motor or discharging cell, which in turn transmits it to the appropriate gland or muscle, where it is expressed in the necessary or desired action; or, the impulse may be expressed within the mind itself by some purely mental activity. The response or reaction to a stimulus, therefore, may be either a new thought or feeling, which in turn may find expression in some form of activity, or it may be some very definite and immediate act which is the direct answer to the stimulus. Ideas which originate within the mind and to which there has been no external stimulus also carry with them the impulse to muscular action.

Reflex acts. The mechanism of the nervous system, as has already been learned, is present at birth in all normal

infants awaiting and ready for further development. Many connections between cells are already made by nature. These are the inborn or inherited connections, and over these natural pathways certain stimuli pass to the cells whose function it is to complete their expression in the required action, without ever coming into consciousness or under the control of the mind. Many acts of this kind are unceasingly taking place in the body. These are the physiological or reflex acts concerned in circulation, respiration, digestion, the reaction of the pupil to light, the emptying of the gall bladder, etc., and do not directly influence the behavior. There are other reflex acts of which one may be conscious but which are nevertheless performed without direction of the mind, such as coughing, sneezing, winking when the eye is touched, and the instantaneous movement of the hand when it is in contact with anything which produces pain. In the course of nervous and mental disease some of the reflex responses, like those to excitation of the sole of the foot, various tendons and the eye, may become exaggerated in action, while others may become weakened or abolished altogether. Inasmuch as research has discovered the pathways traversed by the stimuli which produce these responses, these changes are of great importance in the diagnosis of disease for they indicate where in the central nervous system there has been a destruction of cells or fibers, or a weakening of their function.

Voluntary activity. The first movements, kicking, grasping, crying, etc., are reflex, but as the mental life develops and a movement made at random brings some definite result and a feeling of pleasure or satisfaction, the result and feeling tend thereafter to be associated with the act, and it is purposely repeated, and therefore becomes an act directed by the will or volition. Every voluntary act is prompted by desire and represents a choice of action. There is always a motive or incentive, something to be acquired or accomplished which furnishes the immediate stimulus.

The direction of voluntary activity or behavior is deter-

mined by the ideas, interests, and desires which are most clearly in consciousness. Myriad impressions are being continually received by the sense organs and only a few of them ever come into consciousness or awaken any response, owing to the fact that the vast majority are not selected by attention to be so brought into consciousness. Attention selects from this vast throng of ideas and impressions which are surging incessantly within and without the portals of the mind only those which are related to the purposes, interests, aims and desires of the individual life. Attention may be gained temporarily by a bright light, a moving object, a familiar or unfamiliar sound, a strong odor, a painful sensation or anything which is novel or unusual, unless other and stronger impressions engross it. **Absent-minded** is a term which is frequently used. This does not mean that there is literally an absence or lack of mind, but that the attention is so occupied with certain trains of thought and trends of interests that other impressions are not perceived. In many forms of mental disorder the attention is so absorbed by imaginings, doubts, fears and other morbid thoughts, that other impressions are excluded from consciousness and little heed is given to things present. To arouse new interests which will gain and hold the attention constitutes a large part of the nursing of these cases. Herein lies the value of occupations, for any bit of work which makes demand for voluntary activity of the hands, must for the time being occupy the attention to the exclusion of other thoughts, and when interest in the work is aroused and the demands on attention increase, the old ideas and interests are crowded out and finally displaced. It is sometimes very difficult to attract the attention and to hold it for any considerable period, and many repetitions of effort must be made by the nurse, who should remember that the work must be something which must appear attractive to the patient, and must bear some relation to the interests and aims of his life before his illness.

Inhibition. Just as an act or a movement which produced

some desired result and a feeling of pleasure or satisfaction tends to be repeated, so a movement or act which has produced an undesirable result or unpleasant feeling is not likely to be voluntarily repeated, for whenever an impression whose response would be unpleasant comes into consciousness, the impulse is repressed or inhibited, so that the reaction does not take place. Laboratory experiments have shown that purely reflex responses can be inhibited by an intercepting impulse, and it is a fact of experience proved almost every moment of every day that whenever an impression comes into consciousness its direction is determined and the immediate response may be checked or inhibited by conflicting impressions. Inhibited impressions survive in memory long after the event has taken place and at a later time may become active to influence behavior. Inhibition implies the exercise of judgment, a capacity which is developed through experience. Innumerable tendencies to react to inherent impulses and sense impressions are continually coming into consciousness, only a small part of which are allowed to find expression in action, for the remainder are repressed and the energy of the impulses tends to become dissipated within the nervous system. Psychiatrists hold the belief that various impulses so repressed remain active and under certain conditions become potent in the causation of some of the functional mental disorders.

In some types of mental disease the power of inhibition is so interfered with or weakened by the action of intercepting impulses that the mind is no longer able to exercise direct control over the activity, for the patient seems to react to every impression and the mental and muscular activity are markedly increased; or, the power of inhibition may be so strengthened by other impressions that very few impulses are released to find expression and the activity is greatly diminished, but when these conflicting ideas and impulses are removed other ideas and impulses are liberated and become active.

Instincts. There are many inborn tendencies to act which have neither been acquired by experience nor learned by training, and whose expression is not directly under the control of the will. These tendencies are termed instincts. The responses are for the most part made up of simple reflex acts which must be thought of as depending upon pathways and connections already made by nature. These tendencies are common to all the species and are transmitted from generation to generation, and serve a useful purpose in the mental and physical development and the adaptation of the individual to his environment. The primal instincts have to do with self-existence and the sucking instinct is about the first to appear, as also are the tendencies to grasp and carry objects to the mouth. Other basic and fundamental instincts are concerned with self-protection and preservation, and are shown by the tendencies to repulse and flee from danger, to resent, resist and fight when necessary, and those which have to do with the perpetuation of the species, the sex and parental instincts. In man whose infancy and period of dependence is prolonged so much beyond all other species, these instincts appear very gradually, and while some tendencies may appear soon after birth and in the early days and weeks of life, others, like creeping, walking, talking, etc., are delayed for several months; others, like self-assertiveness and independence, appear with the development of personality, the consciousness of self; and others, like the sex and parental instincts, are further delayed and appear at the age of puberty and adolescence.

Some of the **more common instincts** are: Imitation, whereby one learns many of the more complex movements and acquires the behavior of those about him; play; rhythm; curiosity, finding out by questions and manipulations why things are thus and so and what they mean, how they are made and for what use; sociability or gregariousness, the tendency to be with others in a group; rivalry, striving to reach or attain the same objects and ends which others of the **group** are pursuing, and if possible to excel; coöperation,

the tendency to work with and be of help to others; collecting, hoarding and ownership; religious tendencies and the benevolent interest in the weak or suffering. All instinctive tendencies are not desirable, and throughout the ages those which have been useful have survived and by encouragement and expression have been developed, while those which served no useful purpose have been weakened by lack of exercise and encouragement or repressed and kept in subjection by fear of punishment or disapproval. Some of the combative instincts, which were very useful to primitive man when there were no agencies to protect his property or laws to regulate behavior, have little place in a community where civic laws and agencies have replaced individual brute force. Bullying, teasing tendencies often come strongly into prominence in early youth and are promptly weakened by criticism, disapproval and punishment, and tend to disappear. Tendencies to rob and to destroy, the predatory instincts, which may have been needful to primeval man, but through centuries of civilization have been suppressed, will sometimes spring up with tremendous force and energy. This is especially to be noted when boys in gangs will, on occasions when police vigilance is relaxed or wanting, destroy fences, mutilate houses, steal detachable property for no other reason than to find an outlet for imperious impulses, knowing full well the consequences if they are discovered or apprehended.

Throughout life these instinctive tendencies are operative and are ever seeking expression. In mental illness, when the power of inhibition is weakened, many of the primitive impulses which have long been repressed become active and find expression. Instead of trying to control them by direct inhibition or repression, it is far better to utilize the nervous energy in developing a new and more healthful form of activity; that is, control one activity which is not useful or desirable by doing something else which at least is not harmful, and if possible useful. In the reëducative measures which form so large a part of the nursing care of

the mentally ill the instinctive tendencies should be appealed to and utilized in the formation of new habits of thinking and acting, for efforts thus directed most frequently produce the desired results.

Habit formation. In physiology it is assumed that every impulse which discharges over a given route in the nervous system tends to make a pathway over which subsequent impulses, initiated by a like stimulus, will more easily travel, and that each repetition tends to make the pathway more deep and lasting. The ability to acquire various movements of skill solely by practice is the proof of this theory. An instinctive or voluntary act whose performance in the beginning was difficult and required constant direction by the mind is, after many repetitions, converted into an act which is performed easily and without conscious direction. The child learns to walk only by giving to every movement the most deliberate conscious attention, but in time and with practice the complicated muscular movements are made involuntarily, and the attention can be completely occupied with other interests, and only the initiation is conscious and voluntary. The response to the stimulus has become **automatic** or habitual, and whenever a given situation arises or impression recurs, the reaction will be what it has been in the past, unless it is intercepted or repressed, for the impulse will follow the old pathways of discharge. Behavior is very largely made up of these automatic responses or habits. Psychologists have estimated that not more than one in ten of our waking acts is the result of conscious choice or volition. Habits play a very important part in the development of the individual life, for they tend to make movements more simple, easy and accurate, to reduce fatigue and lessen the conscious attention required in their performance.

What is true of the reactions which are expressed in muscular movements is also true of mental reactions. An idea or feeling which has been associated repeatedly with another idea or feeling tends always to follow that pathway, for

habits of thought are just as easily acquired and firmly established as those expressed in muscular movements. The formation of good and healthful habits, both of mind and conduct, is of inestimable value in the preservation and promotion of health. When it is realized that every thought, every feeling, every action is being impressed and recorded in the mind to contribute in the future to determine behavior, too much attention and thought cannot be given to the formation of habits which will be useful, helpful and healthful. **Character** means, literally, to "engrave." The habits of thought and conduct which may be so largely determined and controlled by choice or volition are unconsciously being engraved on the mind and are subtly operating to mold the character. Professor James says: "The hell to be endured hereafter, of which theology tells, is no worse than the hell we make for ourselves in this world by habitually fashioning our characters in the wrong way. Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. Every smallest stroke of virtue or of vice leaves its never so little scar. The drunken Rip Van Winkle, in Jefferson's play, excuses himself for every fresh dereliction by saying, 'I won't count this time!' Well! he may not count it, and a kind Heaven may not count it; but it is being counted none the less. Down among his nerve cells and fibres the molecules are counting it, registering and storing it up to be used against him when the next temptation comes. Nothing we ever do is, in strict scientific literalness, wiped out."

Some functional disorders of the mind are kept going because certain pathways along which morbid ideas, doubts and fears tend to pass are so firmly established, and on account of the inertia of the nervous system old connections and associations are not interrupted but allowed to persist and continue and no new pathways are made. An important part of the nurse's duty is to help the patient to interrupt,

break off and discontinue old associations and reactions which are harmful and contribute to prolong and aggravate the mental disorder, and to form new associations and reactions which by repetition will become fixed in habits which will aid in the restoration and promotion of health. Just as an undesirable act is best controlled by having the patient utilize the energy in doing something else, so morbid trains of thought can best be controlled by substituting for them other ideas and associations which are healthful. The power of will is limited and cannot for long exercise control over the thoughts by merely driving them out and keeping them out of mind, unless other ideas are put in their places, and it is only by persistent, patient effort, put forth again and again in spite of hindrance and failure, that one is able to get rid of old and disturbing trains of thought, for they tend to recur so surely in response to old stimuli. A change of environment from home to hospital often proves very beneficial for this reason. In the old environment impressions and influences which may have been precipitating factors in the mental breakdown are ever present and are continually operating to keep the morbid impulses active, but in a new and different environment among new surroundings and people they have not known, new modes of behavior are demanded and new ideas and trains of thought are created which interfere with and interrupt the old associations, so they recur less and less frequently, and gradually are so weakened by disuse that eventually they disappear from consciousness.

For the patient who is struggling to break off and get rid of old, undesirable and harmful habits of thought and conduct, committing to memory the little poem by John Boyle O'Reilly, "How shall I a habit break," has been found to be a very practical nursing measure, for it has helped to exclude old thoughts and interests, to increase the courage, to strengthen the determination and to bring about a happy result. For the convenience of those not acquainted with it, this poem is inserted.

“How shall I a habit break ?’
As you did that habit make.
As you gathered you must lose.
As you yielded now refuse.
Thread by thread the strands we twist
Till they bind us neck and wrist.
Thread by thread the patient hand
Must untwine ere free we stand.
As we builded stone by stone
We must toil unhelped alone.

“But remember, as we try,
Lighter every step goes by ;
Wading in the stream grows deep
Toward the centre’s downward sweep ;
Backward turn, each step ashore,
Shallower is than that before.
Ah ! the precious years we waste
Leveling what we raised in haste,
Doing what must be undone
Ere content or love be won !

“First across the gulf we cast
Kite-borne threads till lines are passed
And habit builds the bridge at last.”

Emotions. There is a law in psychology that whenever an idea comes into consciousness it tends simultaneously to produce an associated feeling which impels one to make certain appropriate movements or reactions. The feeling may be pleasant or unpleasant, depending on whether the response to the impression or idea has in the past been accompanied by a pleasurable or disagreeable feeling. Ideas which are associated with or accompanied by certain definite feelings either of pleasure or pain, meaning discomfort, unpleasantness or dissatisfaction, are termed emotions. All experiences tend to become associated with definite feelings or emotions and are colored by them.

The origin of these feelings has been explained in this way : When the response to any impulse is adequate, a pleasurable feeling is produced, and the idea which produced the im-

pulse and the feeling tends to disappear from consciousness; when it has been repressed or inhibited and so fails of adequate expression a feeling of unpleasantness or dissatisfaction is aroused; and when it has been blocked by some external force so that action is hindered or denied, other and stronger feelings are engendered which demand more vigorous reactions. Therefore, psychologists have established the law that the reaction to an impulse or desire must be sufficient to satisfy fully the demand of the emotional feeling. An instinctive tendency like imitation, finding expression in copying the acts of others, arouses the feeling of admiration, but when it is balked or frustrated in its execution a feeling of vexation is created. When curiosity is blocked, there is produced a feeling of perplexity; pugnacity, normally arousing a feeling of resentment, may be converted, when frustrated, into anger and frenzy; when the gregarious instinct expressed in sociability fails of realization, a feeling of homesickness is produced; (when rivalry is blocked, feelings of envy and jealousy are created; and the sex instinct failing of adequate expression gives rise to feelings of sex jealousy.) In like manner every instinctive impulse or desire may result pleasantly or unpleasantly, depending on the adequacy or inadequacy of the response.¹

Pleasurable emotions are exhilarating and stimulating, for they arouse the mind to greater activity, inspire confidence and courage, and incite to more vigorous muscular activity. They are, therefore, useful in creating new ideas and interests which produce new activities. The **unpleasant emotions** tend to have a depressing effect, for they lower the vitality, produce mental fatigue and inertia and greatly diminish the bodily activity. They, too, serve a useful purpose, for old habits of thought and conduct which "have dulled the mind and mechanized the behavior, are at least temporarily interrupted and the opportunity is thus offered for a new start and the gradual formation of a new set of habits and new attitudes of mind."

¹"Human Behavior," Colvin and Bagley.

Emotions demand vigorous expression and produce numerous and usually intense bodily reactions. The child, when happy, jumps and skips; when hurt or grieved, weeps; and when angry, kicks and strikes; but as experience increases the expression comes more and more under the control of the will, and self-control or mastery of the emotions is a very important factor in the education to health. In diseases of the mind when the normal function is deranged, loss of emotional control is among the early symptoms.

Mood. Emotional experiences make a strong impression on the mind and tend to persist and linger in consciousness, and so remain active in influencing and dominating the attitude of mind. Mood is a temporary state of mind which may be changed or terminated by conflicting or stronger emotions and by voluntary interference. The feelings are subject to the law of habit, for the indulgence of one sulky, gloomy or unhappy mood predisposes to and makes more easy a recurrence.

Temperament. Heredity gives to each individual certain physical characteristics of feature, form and coloring; it also gives him certain personal peculiarities or characteristics of mind which are forceful in determining what the permanent emotional attitude or temperament shall be. Hippocrates, 460 B.C., recognized and explained the origin of four different temperaments. His explanations were long ago rejected, but the names he gave are still applied to the four traditional temperaments. These are: Sanguine, or sanguineous, applied to a person who is bright, lively, cheerful and easily excited to action; choleric, one who is impetuous, easily moved to anger and vehement in action; melancholic, one who is habitually unhappy, gloomy, sad and depressed; and phlegmatic, one who is dull, listless, indifferent and very slow to act.

The tendencies and characteristics given by nature and ingrained in the physical organization are perpetually being energized, antagonized and annihilized by the physical, social, intellectual and moral forces of the environment so that

they are modified, changed and molded into other tendencies and reactions. While the question whether heredity or environment is the more powerful in determining the permanent mental attitudes is being discussed and argued, both must be acknowledged to be important factors in the causation of the functional mental disorders. There are some types of mental make-up or constitution who, while not directly predisposed to mental disease, seem less well able to withstand strain and worry, fatigue and overwork, disappointment, sorrow and misfortune, for whom the readjustments and adaptations demanded by an ever-changing environment are more difficult, and under stress the nervous mechanism becomes disordered. These have been termed the **psychopathic personalities**.

Psychiatrists affirm that these personalities show tendencies so characteristic of the different constitutional or functional psychoses that they indicate the form of mental disease to which they are especially liable, for it has been noted that the earlier traits and characteristics tend to persist throughout the period of mental illness and the symptoms are many times but exaggerations of these tendencies. A person who early in life shows a lack of ability to readily adapt himself to changes in the environment, although bright, even precocious intellectually, and tends to become reticent and seclusive, less interested in the world about him, more concerned with his own thoughts and interests, and for whom the responsibilities and requirements of life make demands he cannot efficiently and adequately meet, may in order to escape from the situation develop a mental disorder, dementia præcox, for by this means he gets away from the requirements of reality by creating a new and imaginary world in which he can live more favorably. One who does not get along well with other people, is conceited, selfish, easily offended, quarrelsome, feels he is not fairly treated, that he has not an equal chance in the world, shows characteristics which may become stronger and more fixed and develop into the delusions of the paranoic. One who is

very enthusiastic, intense, inclined to exaggerate in all he does, easily excited, irritated and made angry shows tendencies and characteristics which have been found to make up the normal temperament of the maniac. Another who is easily disturbed and made unhappy by trifling occurrences and worries much about them, fights his battles over and over, has "blue spells," and for whom it seems more easy to hold disturbing and disquieting thoughts than to banish them from mind, gives evidence of tendencies which the symptoms of the depressive psychosis only intensify. Another who is oversensitive, habitually tired and "nervous," hesitating and wavering, worried about the past and anxious about the future, continually harassed by some bodily discomfort or pain, disturbed by fears and forebodings, disquieting thoughts and feelings reveals mildly the symptoms of the psychoneuroses.

Obviously is it imperative that these persons should the more assiduously conserve their physical strength and vigor, form habits which are temperate and healthful, and with more than usual vigilance guard against everything which could contribute to weaken and derange the nervous system, which already gives evidence of abnormality.

Intellectual function. Of the three functions attributed to the mind, thinking, feeling and acting, there remains for summary the intellectual, or thinking.

Sensations are impressions which are received from the outer world by means of the sense organs and from one's own body, and are brought into consciousness by a mechanism already described in the first part of the chapter. The sensations are: **Visual**, received from the eye, giving impressions of light and color; **auditory**, from the ear, giving impressions of sound; **tactile and thermal**, from the skin, giving impressions of touch and temperature (heat and cold); **gustatory**, from the mouth, giving impressions of taste; **olfactory**, from the nose, giving impressions of smell or odor; **kinæsthetic**, from the muscles and structures of the inner ear, giving impressions of weight and resistance, of the

movement of one's body and its position in space. Other sensations are: **Cutaneous pain**, arising chiefly from the skin, and **deep pain**, chiefly from the muscles; **hunger**, from the stomach, **thirst**, from the mucous membranes of the throat, and **fatigue** from the muscles. Professor James has defined sensations as "first things in the way of consciousness," and asserts that only in infancy are pure sensations received, for the conscious impression or sensation is immediately given a meaning or is interpreted in the light of former experiences and becomes a percept.

Perception is, therefore, the conscious recognition of the cause of a given sensation.

In the course of nervous and mental disease, sensation may be rendered more acute, or it may be dulled or lost, and as sensation is impaired, perception suffers.

For **neurological examinations** the nurse must always have ready the **sensation tray or basket**. A basket 7"×10"×3" with a low, firm handle, made of reed or willow, which can be easily scrubbed and kept clean, with a light partition of wood making a compartment for small bottles, will be found most convenient and satisfactory. This basket should contain the following articles: Six small bottles containing solutions of sugar, salt, acetic acid or vinegar and quinine for testing taste, and peppermint and camphor, or some other well-known aromatic solutions for testing smell; toothpick swabs for use with the solutions; tuning fork for testing hearing; an applicator pierced at one end with a black dressing pin for testing touch and cutaneous pain to locate areas of anæsthesia and hyperæsthesia; flecks of cotton for lightly touching the skin; test tubes containing hot and cold water for testing temperature; a flash light for testing the light reflex of the eye; percussion hammer for testing the deep tendon reflexes, and a blue pencil for marking the skin.

Memory is the storehouse of the mind in which sense impressions and experiences are held in such manner that at a future time they may be again brought into conscious-

ness to aid in determining the activity. Memory is made up of three elements: **Retention**, the power to hold and store impressions and experiences; **recall**, the power to reproduce them again in consciousness; and **recognition**, the power to know they belong to past.

Retention depends primarily upon the inborn characteristics of the nervous system and also upon the health and age of the individual and other factors like fatigue. In the early years of life impressions and experiences are well retained, due to the great plasticity of the nervous system, and the intensity of the impression, due to freedom from interference with the new ideas by older ones; but in old age, when these characteristics are diminished, or lost, new ideas and experiences are retained with greater difficulty, and sometimes not at all.

Countless numbers of impressions are continually being received by the sense organs and by them conducted to the cerebrum, where they are brought either clearly or dimly into consciousness. It is believed that all impressions and experiences are imprinted on the mind and retained by it, for impressions which never came into consciousness at the time they were received may years afterwards, or during illness, be reproduced. Much of normal function has been learned from pathological conditions and the belief that all impressions tend to be retained by the mind has been strengthened by evidence disclosed during periods of mental derangement, when impressions and experiences of which the patient had no knowledge, arise in consciousness.

Impressions which gain the attention and arouse a feeling of interest, are associated with other ideas and experiences according to certain laws of association, that is, because of some natural relationship, similarity or contrast, and proximity in time and space. In this way experiences are associated with or bound together with other experiences, ideas with other ideas and feelings and muscular reactions into groups, and these groups are associated with other groups and form systems.

Recall depends upon previous impression, retention and association. The order in which ideas and experiences are brought back or revived in consciousness depends upon what ideas and experiences they have been associated with most frequently or habitually, most recently, most closely, and most vividly or intensely. Recall is always accompanied by recognition. Recognition, however, may take place without recall.

Certain ideas and experiences which have become associated with other ideas and experiences into groups to which strong feelings have been attached have been termed "**complexes.**" The belief is held that some of the functional nervous disorders have their origin in these complexes, many of which are buried deep in mind, of whose presence the patient is not conscious and which he cannot recall. Various association tests and experiments have been devised and applied by physicians in order to discover the existence of these hidden complexes and as a means of ferreting them out so that they can be analyzed and their significance explained.

Reasoning and judgment. As the mind has the power of association, so also it has the power of dissociation or analysis, by which a given situation may be broken up into its component parts, and from these, by comparison and association a new idea or judgment is formed. Dissociation is later in developing than association and is a very important part of the mental life. By experience and training it is developed, and represents the highest form of intellectual activity — **reasoning.**

From this brief summary it is hoped the student nurse will have learned something about the laws which control human thought and conduct, and realize that for everything in the mental life, every thought, every feeling, every action, there is a reason, which will make her more tolerant of and sympathetic with peculiarities in the behavior of patients under her care who otherwise would appear uninteresting, unreasonable and disagreeable; that she will be

more eager to understand the causes of abnormal mental activity, and to have a part in the restoration to health of those who are mentally ill, for to her is afforded the extraordinary opportunity of supplementing the physician's efforts to modify and change tendencies and characteristics which may be harmful, to hold ever before the patient the ideals for which he should strive, to form such habits of thought and conduct as will help him to attain them, and so secure for him the greatest measure of health, happiness, usefulness and efficiency in the future.

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CHAPTER II

HISTORY OF THE CARE OF THE MENTALLY SICK

Mental disease is as old as the human race, and its earliest history is that of disease in general, for much mystery and superstition surrounded every form of sickness. All ancient peoples believed it to be a form of punishment which was inflicted for sins and wrongs committed, and an indication of displeasure on the part of the deities they worshipped. What to-day is known to be mental disease was very generally believed to be a form of demoniacal possession, and, therefore, no medical measures were applied to relieve the symptoms, but various forms of exorcism and conjuration were practised.

As far back in history as 860 B.C., there is record that many of those afflicted with mental illness repaired or were carried to the temples of Saturn in Egypt and of Æsculapius in Greece, to be relieved of their torments by the priests, who made a study of their disorders and applied measures to relieve the symptoms. These temples were situated for the most part in mountainous and healthy places and as near as possible to medicinal springs. The pilgrimages were made in much the same spirit that sick folk in more modern times have sought alleviation of their sufferings by journeying to sacred shrines and springs. The treatment at the temples had many of the remedial features of the treatment of to-day, suggestion, kindness, occupation, music and recreation. In an ancient writing it is recorded of the Æsclepiea that "as often as they had phrenetick patients, or such as were unhinged did make use of nothing so much for the cure of them and the restoration of their health as symphony, and sweet harmony and concert of voices."

In the centuries which followed, these humane measures of treatment were completely lost sight of, for the treatment in general of the mentally ill was barbaric. Little or no attention was given to them, nor were remedial measures provided. Only a small part of those whose symptoms were mild could be received into the monasteries, while those whose symptoms were more severe were incarcerated in dungeons where they were brutally treated, chained, flogged, scourged and starved, in the belief that the evil spirit which possessed them could by these means be driven out. Many were treated as criminals and executed, and others were burned to death, a popular punishment for witches. Hippocrates, a Greek physician, who lived 460 B.C., appears to have been the first to understand these disorders, for he declared his belief that mental disease was a disturbance of the function of the brain.

In England, in 1537, a house in Bishopsgate Street was granted by Henry VIII to the corporation of London, and was appropriated at once for the reception of fifty "lunatics." This was called Bethlehem Asylum, corrupted later to Bedlam Asylum. The patients from this asylum were allowed to go about the streets begging for charity and were popularly called "Bedlam beggars" and "Tom-o'Bedlams."

Bedlam beggars who with roaring voices . . .
Sometimes with lunatic bans, sometimes with prayers,
Enforce their charity.

King Lear, II, 3.

In 1814 the present hospital in St. George's Field was erected, and this was called the New Bethlehem, or New Bedlam. In 1820 Bedlam was one of the great sights of London, for the keepers were allowed to exhibit the most boisterous and violent of the patients, charging a fee of one penny or two pence per head, which they retained for their personal use.

About 1750 other houses of detention were established in other places, not because of any feeling of pity or compas-

sion for these unfortunate patients, but only to meet the demand for public safety and comfort, and many more of these miserably sick folk were confined in these mad-houses, misnamed asylums, where not much supervision was given and that by persons who had little interest or understanding of their conditions and less sympathy for them. They were for the most part naked, or in rags, they had no beds to sleep on, only a bit of straw was strewn about the floor, and the sanitary conditions were deplorable. The most incredible and ingenious forms of torture were devised and their use was approved by the physicians. Machines to revolve at a high rate of speed to whirl the patients through space, horrible noises and smells, baths of surprise in which the patients, taken to bathe in the usual way, were plunged through the bottom of the bath, which gave way under their weight, into deep, cold water in utter darkness, slimy dungeons without light or ventilation and too often infested with vermin, and starvation, were some of the horrors these sick people had to endure. Many of them wore heavy iron collars, belts and anklets by which they were chained to the walls of the cells or caves. Scarcely does it seem possible that this inhuman treatment could have gone on until the middle of the last century!

There are, however, some bright spots in this tragic history. In France, Philippe Pinel, in 1792, was appointed physician to Bicêtre, the great hospital for male patients in Paris. Conditions there were much the same as those prevailing in England and other parts of Europe, and he speedily set about to change and improve them. He abolished all forms of restraint, eliminated many abusive practices, and substituted for them humane measures of treatment.

About this time in England, in the city of York, William Tuke, a member of the Society of Friends, aroused by conditions in the York County Asylum, became active in raising funds to establish a retreat for members of the Friends Society who were or should become mentally afflicted. In 1796 York Retreat was opened for the reception, care and

treatment of mental patients. All restraint was abandoned, and sympathetic care in quiet, pleasant surroundings with some forms of industrial occupation were provided. The names of Pinel and Tuke will forever be associated with the humane treatment of the insane. They demonstrated conclusively that when restraint and brutal authority were abolished and treatment by kindness was substituted, the management of these patients became far less difficult.

In America, during the eighteenth century, little consideration appears to have been given to the mentally ill, and whenever custodial care became necessary it was provided at the minimum of attention, labor and expense. Many of them were permitted to roam about the streets, where they were subjected to many forms of ill treatment, or to wander about the country exposed to all sorts of hardships and dangers. Some who were mildly ill and fairly manageable were cared for in the almshouses with other destitute and helpless poor folk, or in homes which too often were barren of comfort and sympathy by people who were willing to harbor them in return for the meagre income they received; while the more unruly and disturbed were placed in cages or pens in jails with other disorderly persons and criminals.

There were, however, physicians and benevolent citizens who appreciated that the mentally deranged should be classed among the sick and diseased, and made efforts to adequately provide for their care and treatment. Members¹ of the Society of Friends in Philadelphia, as early as 1709, put forth some efforts towards establishing a hospital, but no definite results were realized for more than forty years, when the movement was revived with the help of Dr. Thomas Bond, "a physician and a man of great benevolence whose profession brought him in daily contact with the insane poor, the sick and the injured." He made many appeals for contributions, but seems to have met with little success, and finally enlisted the interest and assistance of Benjamin

¹ "Institutional Care of the Insane," Vol. III.

Franklin, who had great influence in the colony. They drafted a petition to which the names of thirty-three citizens were affixed, and presented it to the Provincial Assembly on January 23, 1751.

“To the Honourable House of Representatives of The Province of Pennsylvania, The Petition of Sundry Inhabitants of the said Province, Humbly sheweth,

“THAT with the Numbers of People, the number of lunatics or persons distempered in Mind and deprived of their rational Faculties, hath greatly encreased in this Province.

“That some of them going at large are a Terror to their Neighbours, who are daily apprehensive of the Violences they may commit; and others are continually wasting their Substance, to the great Injury of themselves and Families, ill disposed Persons wickedly taking Advantage of their unhappy Condition, and drawing them into unreasonable Bargains, etc.

“That few or none of them are so sensible of their Condition as to submit voluntarily to the Treatment their respective Cases require, and therefore continue in the same deplorable State during their Lives: whereas it has been found, by the Experience of many Years, that above two Thirds of the Mad People received into Bethlehem Hospital, and there treated properly, have been perfectly cured.

“Your Petitioners beg Leave farther to represent, that though the good Laws of this Province have made many compassionate and charitable Provisions for the Relief of the Poor, yet something farther seems wanting in Favour of such, whose Poverty is made more miserable by the additional Weight of a grievous Disease, from which they might easily be relieved, if they were not situated at too great a Distance from regular Advice and Assistance; whereby many languish out their lives tortur'd perhaps with the Stone, devour'd by the Cancer, deprived of Sight by Cataracts, or gradually decaying by loathsome Distempers; who, if the Expense in the present manner of Nursing and Attend-

ing them separately when they come to Town Physic and Surger, be enabled to taste the Blessings of Health, and be made in a few weeks, useful members of the Community, able to provide for themselves and Families.

“The kind Care our Assemblies have heretofore taken for the Relief of sick and distempered Strangers, by providing a Place for their Reception and Accommodation, leaves us no Room to doubt their showing an equal tender Concern for the Inhabitants. And we hope they will be of Opinion with us, that a small Provincial Hospital, erected and put under proper Regulations, in the Care of Persons to be appointed by this House, or otherwise, as they shall think meet, with Power to receive and apply the charitable Benefactions of good People towards enlarging and supporting the same, and some other Provisions in a Law for the Purposes above mentioned, will be a good Work, acceptable to God and to all the good People they represent.

“We therefore humbly recommend the Premises to their serious consideration.

“It is noteworthy that precedence was given to the ‘distempered in mind,’ and that the idea of disease and cure was the dominant motive, a conception which anticipated in those early days the most advanced thought of the present time.

“The great merits of the cause, aided by the clever tactics of Benjamin Franklin, procured the charter of the Pennsylvania Hospital, which received the approval of the Governor on the 11th day of May, 1751, and represents the pioneer attempt in America to create a hospital for the care and treatment of the insane.

“Pending the acquisition of a suitable site and the erection of permanent buildings, a temporary hospital was maintained in the Judge Kinsey mansion on Market Street, below Seventh, into which the first patient was received February 11, 1752. The new Pine Street Hospital was opened December 17, 1756, and provided for both the insane and the sick and injured, up to the occupation of the

Department for the Insane in West Philadelphia on January 1, 1841. During nearly thirty years of this period Dr. Benjamin Rush, the father of psychological medicine in America, was the skilled physician and faithful friend of all its patients, particularly the insane."¹

It is interesting to note that in 1798 Dr. Rush advocated manual and industrial occupations as a valuable means of therapy.

In other colonies efforts were being put forth to meet the urgent and increasing need of providing proper care and treatment for their insane and sick, and in Virginia "The Publick Hospital for Persons of Insane and Disordered Mind" was incorporated in 1768, and on October 12, 1773, was opened at Williamsburg, for the reception of "idiots, lunatics, and persons of unsound mind." This was the first hospital in America to be used exclusively for the care of the mentally sick. Years later the name was changed and it is now known as the Eastern State Hospital.²

The New York Hospital in the city of New York received its charter in June, 1771, and efforts were at once put forth to secure funds to erect a hospital for the "reception of such patients as require medical treatment, chirurgical management and maniacs." The hospital was built and received its first patients January 3, 1791. The department for the maniacs was situated in the basement, which had been "fitted up for the temporary accommodation of patients whose particular disease renders it necessary to remove them from intercourse with others." These accommodations were soon inadequate, and in 1808 a separate building known as the "Lunatic Asylum" was opened for the exclusive use of patients suffering from mental disorders. This was the beginning of what is now Bloomingdale Hospital.³

In Maryland, the Legislature provided funds in November, 1797, for the erection of a hospital for the care of the indigent

¹ Extract from "Institutional Care of the Insane."

² "Institutional Care of the Insane."

³ *Ibid.*

sick and the insane. Construction was begun in 1798 in Baltimore, on the present site of the Johns Hopkins Hospital, and the hospital was opened that year. That the portion of it which was devoted to the care of the mentally sick bore slight resemblance to a hospital is to be inferred from a part of a report submitted to the Senate in 1829. "Few of the lunatics have either beds or bedsteads, and this your committee has been told is necessary for their comfort, as straw is substituted from the facility with which it can be changed; but your committee is sorry to add that from the report of its steward and also from the strong smell of the straw in the cells, it does not appear that the change of this article is as frequent as it should be for the comfort and benefit of the lunatics."¹

The nineteenth century saw the movement further carried on in other states. In 1811 the Friends began to get together funds for a hospital for such members of their Society "as may be deprived of their reason" and in 1817 the Retreat at Frankford, Pennsylvania, was opened. In 1811 the Legislature of Massachusetts granted a charter to McLean Asylum, which was opened for patients at Somerville, Massachusetts, in 1818. The Retreat in Hartford, Connecticut, was opened in 1824, an Asylum in Worcester, Massachusetts, in 1830, and the New York Lunatic Asylum, in 1835, and others followed.

One name will forever be associated with the movement for the proper housing, care and treatment of the mentally ill in this country. In 1841, Miss Dorothea Lynde Dix, a school teacher in Massachusetts, hearing of the deplorable and pitiable conditions of a few lunatics who were confined in the East Somerville jail, made an investigation and found them in the dead of winter confined in dark, poorly ventilated and unheated cells, where frost was white on the walls, and scantily clothed because in their frenzy they had torn away their clothing. That human beings who were not responsible for their behavior could be thus cruelly treated

¹ "Institutional Care of the Insane."

so aroused her indignation and pity that she visited other jails and almshouses where such patients were confined, and found conditions everywhere much the same. She embodied the results of her inspections and investigations in a long report or "Memorial" which was presented to the Legislature of Massachusetts, with the demand that proper housing and care for these unfortunate and neglected patients be provided. So incredible did the contents of that memorial appear to the members of the Legislature that a committee of their own number was appointed to verify her statements. Every charge was later substantiated and immediate reforms were initiated.

This was the beginning of a most notable service for suffering humanity, for Miss Dix went from state to state the country over, and pursuing the same methods of investigation, report and personal appeal to public-spirited women and men who had the authority to remedy conditions, she so aroused the public conscience that money by the millions was given to erect hospitals in those states where there were none, and to enlarge and remodel asylums which already existed so they might more adequately meet the demands of care and treatment, and laws which governed the treatment of the mentally sick were radically changed for the better. Although handicapped by lack of physical strength, for Miss Dix had always been frail, she extended her labors to Canada and to Europe, where beginning in England and Scotland, and later visiting nearly every country on the continent, she was able to suggest changes and reforms which greatly improved conditions there. For twenty years she labored arduously and accomplished what might well be looked upon as a life work, but at the beginning of the Civil War, although nearly sixty years of age, she was among the first to answer the call of her country and volunteered her services. These were accepted and she was given the task of organizing the women nurses and supervising their work in the field. For four years she labored continuously without furlough, and for eighteen months

after the close of the war she remained at Washington carrying out as fully as possible the promises she had made to dying soldiers. When this task was finished she again took up the work in behalf of the mentally afflicted, and continued it until at last illness compelled her to relinquish active work. Having spent her fortune in efforts to make others more comfortable and happy, she was given a home in the hospital at Trenton, New Jersey, the first to be erected as a direct result of her efforts. There she lived for a number of years, surrounded by every comfort and actively interested in the care of mental patients, her mind remaining unclouded as her bodily strength failed.

So outstanding were her services that a resolution was presented in Congress to provide a memorial to her at her birthplace in Hampden, Maine. The report of the committee to which it was referred was presented to the House of Representatives, March 1, 1901, and said in part:

“Miss Dorothea Lynde Dix occupies a conspicuous place in history as a philanthropist. Certainly no other woman of modern times has done more to earn the gratitude of the people of this country than this self-sacrificing and devoted woman. Her services as chief of the hospital nurses of the United States during the Civil War, and her extraordinary success in establishing institutions for the insane — over thirty in number — in the South and West and elsewhere in this country before and after the Civil War, place her among the noblest examples of humanity in all history.”

The more recent history requires no special narration, for to-day, everywhere, there are hospitals for the reception, care and treatment of these patients, and vast sums of money are annually expended for this purpose. With the better care and treatment has come so great change in the character of the symptoms that the remark is not infrequently heard that the diseases have changed because the wild, raving, shouting maniac is no longer seen and heard; but those who have followed closely and had a part in the development of these improved measures ascribe the change

to intelligent medical treatment and sympathetic nursing care which have been substituted for the old methods of neglect, restraint and cruel authority.

The modern hospital which has for its purpose the care and treatment of the mentally ill, has a staff of physicians who are specialists, a staff of nurses who are intelligent and trained in the care of mental disorders, beautiful and costly buildings with bright wards, dining rooms, living rooms and sun parlors, all made more cheerful and attractive by rugs, window hangings, pictures, books, plants, birds and musical instruments; laboratories for research, — clinical, histological, psychological and X-Ray; departments of electrotherapy, hydrotherapy, mechanotherapy and occupation therapy; gymnasium, swimming pool, amusement hall, chapel, library, conservatories and centres of recreation and industry, golf links, ball fields, tennis courts, gardens, sewing rooms, shops, laundry, etc., many windows without guards and doors which are not locked, and large numbers of patients permitted to walk about the grounds unattended.

Here is provided for these patients not only a hospital, but all the features of community life which are essential to the development and maintenance of health, an environment which is especially adapted to their needs, where they are under the direct supervision of those who understand them and appreciate their condition, and know their limitations. Is it to be wondered at that mental hospitals to-day, even the largest public institutions have an atmosphere of cheerfulness, industry and contentment?

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CHAPTER III

SOME LEGAL ASPECTS OF MENTAL DISORDER

Insanity, meaning "unsoundness," is a term applied by the courts of law to conditions of mental derangement, and has been adopted generally to include all forms of mental illness. It is, therefore, a legal and social term and not a medical one. From the medical standpoint no definition of insanity is possible, for a person mentally ill may be entirely competent according to the Statutes which provide that the test of competency is the person's fitness to attend to the ordinary common affairs of life. The mental activity may be perverted or disordered in only one particular field, or limited to a single subject as shown by the impulse to do certain acts or by a particular delusion, and at the same time the patient may be quite capable of transacting business and be rational in all other ways.

It is only when mental disease disables socially, when the individual is unable to adequately cope with his environment and is incapable of making the ordinary adjustments in domestic, social and business relations, or commits an illegal act that the question of insanity is raised and his responsibility must be determined.

Responsibility has been held by the courts to mean that "the person is able beyond doubt to comprehend the nature and consequences of his acts, and has sufficient power of will to overcome impulses to commit crime."

While by far the largest number of individuals showing mental aberration are not in hospitals, and do not become really mentally sick, there are many whose symptoms are so severe that sequestration is indicated. Some of these patients have no insight or understanding of their real

condition and refuse treatment and resist admission to hospital; or if they enter voluntarily, will after a few hours or a few days refuse to remain longer and demand their release. Even though the patient may be a danger to himself and a menace to others the physicians and hospital authorities cannot detain him against his will, for under the Constitution no citizen can be deprived of his liberty and the control of his property without due process of law. In order to safeguard and protect the patient as well as promote the welfare of society, commitment or restraint by law is provided.

Commitment regulations are prescribed by Statute and the jurisdiction and procedure vary in the different states. These regulations provide in general that some relative, friend or person who assumes the responsibility of the detention makes formal application for the commitment of the patient. A time and place are fixed for the hearing and notice is given to the patient who has the privilege of appearing and contesting the proceedings. Some states require that notice shall be sent to the next of kin, although the interests of the relatives are at all times secondary to those of the patient. At the hearing the magistrate or other person or persons who may be authorized by law to act in that capacity, receives as evidence the testimony or the sworn certificate of two qualified physicians who have examined the patient, and if he is present he may be questioned. The usual evidence is that "the acts, declarations and conduct of the person are inconsistent with his previous character and habits." If this is proven by the evidence, a judgment of mental aberration or insanity is given, and the patient being "a proper person to be taken charge of and detained for care and treatment," is committed under seal to a hospital which treats mental diseases. It remains for the physician to determine what form of mental disease he is suffering from, whether the condition is temporary or permanent, curable or incurable, and to prescribe such measures of treatment as will cure or improve his condition and so make

him again returnable to society, or if his illness is of too long duration, or if the prognosis is unfavorable or grave, and offers little hope of a return to mental health, to at least bring to the patient's aid such scientific study and measures of treatment as will tend to make the rest of his life as natural and happy as possible.

An individual adjudged insane is held under the law to be incapable of assuming the responsibility of his acts, and is barred from becoming a party to a contract, acting as the executor of a will, and from making a valid will of his own. He is, however, held responsible for his debts and may inherit property. One of the duties of the nurse who has the care of patients mentally ill is to see that they do not sign documents or papers presented to them by relatives or clever and scheming persons without the full knowledge and consent of the physician.

The term of **commitment** is not decreed by the court but is to be determined solely by the condition of the patient. Whenever a patient or any member of his family, or other person directly interested, believes that he is unjustly and unlawfully detained, he may make application for release either by complaint or request in writing. In the judgment of the court a writ of habeas corpus may be issued to the person who holds the patient in custody, commanding him to produce the body of the patient at a certain time and place. The physician and frequently the nurse are required as witnesses and sometimes the nurse's daily notes and records concerning the patient are introduced as evidence.

When the physicians are convinced that the patient has recovered from his illness sufficiently to again take his place in society he is paroled or discharged. In the states where parole is in force the patient is placed in the custody of his family or some other responsible party for a definite period, during which he reports to the physician at stated intervals, and is visited in his home or place of employment by the social worker. In the event of recurring illness he may be returned to the hospital under the former **commitment**,

and further proceedings are unnecessary. At the expiration of the term of parole, if his condition is favorable he is discharged from the hospital and the commitment is no longer in force.

Largely as a result of the mental hygiene movement and the campaign of publicity in relation to mental diseases the attitude of people has been changing, for they are learning that there are many forms and degrees of mental illness, and that a large proportion of those who are ill are harmless. The revulsion of feeling, shame and disgrace which were formerly aroused by and too often associated with the old terms "lunatic," "crazy," and even "insane," are no longer evident when ignorance has been displaced by knowledge of the true nature of mental disease, and a new terminology approved in medicine has replaced the old. The prejudice against mental hospitals which was formed and fostered by the horrors of the old asylums is also broken down as soon as people become familiar with the present-day hospital for mental patients where kindness, patience and sympathy as well as scientific measures of treatment, are now the chief factors in alleviating and curing diseases of the mind.

While legal denial of full liberty may be necessary in some cases, it is undoubtedly true that the mistake is still being made of requiring legal proceedings far too often, for it has been proven repeatedly that the majority of patients will willingly remain in hospital. In ever-increasing numbers these patients are voluntarily asking admission to hospitals and it is good to record that the unnecessary efforts to protect the "legal rights" of the patients are being less and less frequently made, and proceedings which brought into publicity the condition and suffering of the patient, as well as the anguish of the family and friends, are avoided, and the patient is not needlessly adjudged insane and stigmatized.

The nurse is in a peculiarly advantageous position to help combat the force of tradition and overcome prejudice against mental hospitals which is no longer justified, and to dis-

seminate useful and accurate knowledge in regard to the real nature of mental illness, so that the patient or his family will seek medical advice about his symptoms when they first appear and are mild, but no less ominous, rather than because of ignorance, shame or fear of hospital treatment and legal proceedings allow the disorder to progress to a more advanced stage, with the inevitable increase in the severity of the symptoms which too often makes the proceedings in law expedient and necessary.

CHAPTER IV

CAUSES — GENERAL CLASSIFICATION OF MENTAL DISEASES

For ages mental disease was acknowledged to be the most mysterious of all the ills with which mortals were afflicted. The manifestations of acute mental disturbance were at times so sudden and unexpected, and so independent of any physical indisposition, their causes were beyond reason to explain, except that demons had entered into the human frame and taken possession of it, or that witches with supernatural power controlled the behavior, making it diabolical and fiendish. This lack of definite knowledge helped to create a fund of tradition, superstition and prejudice which unfortunately has persisted in various forms almost to the present day. The advances made through medical research and the scientific study of mental disorders have enabled the psychiatrist to know definitely the direct, specific and unmistakable causes of certain types or groups of mental disease, to know also the course which they are likely to take, in how far they will yield to treatment, and the means by which they may be prevented.

According to the etiology, mental diseases may be divided into the following groups: The organic psychoses, the toxic psychoses, psychoses with somatic diseases, and the constitutional psychoses.

1. **The organic group** includes those morbid conditions of the mind which are the result of actual changes in the structure of the brain, — the cells or their fibres, the membranes, or the blood vessels — changes which interfere with the function and produce a derangement of its normal action. In old age or senility, definite changes occur in the cells of the brain which tend to produce a diminution and

loss of mental action. With advancing years the blood vessels of the cerebrum frequently become sclerotic, a condition which not only tends to diminish the supply of blood necessary for normal function, but also causes a weakening of the arterial wall so that it cannot as well bear the high pressure of the blood within, and rupture of the vessel sometimes occurs with varying degrees of damage. Injuries to the cranium produced by physical violence, especially those of fracture and the consequent injury to the deeper structures, and tumors of the brain are other known causes of organic brain disease. Syphilis, an infectious disease of virulent nature, frequently attacks the nervous system and brings about destructive changes in the membranes and cortex which are progressive and fatal. In one of the largest of the New York State Hospitals, 25 per cent. of all the men admitted in the last few years have been diagnosed as paresis, a disease of syphilitic origin, and in the same hospital 47 per cent. of all the deaths for the year 1918 were due to the same cause. It is obviously one of the foremost causes in the production of mental disease.

2. **The toxic group** includes those forms of mental disease which are caused by toxins or poisons. These may be divided into the exogenous toxins—those produced by external agents, and the endogenous toxins—those which originate within the body, or auto-toxins. Chief among the exogenous toxins is alcohol which because of its very general use has been a frequent factor in the causation of mental disease. Alcohol is a poison to the nervous system, even when taken in small quantities; but when taken habitually in quantities so moderate as not to produce intoxication, it diminishes the mental capacity and gradually produces irreparable ravages in the brain tissue, which eventually result in definite impairment and enfeeblement of mental power with loss of efficiency and economic waste. For some years prior to the World War and national prohibition alcohol was the chief etiological factor of the psychoses in from 8 to 10 per cent. of the patients admitted to

the New York State Hospitals. Other external agents are cocaine and opium and their derivatives and preparations and the coal tar products so commonly employed in headache remedies, hypnotics and anodynes.

The psychoses which are caused by endogenous toxins are associated with those physical diseases which occur because of the increased or diminished activity of glands upon which the integrity and health of the nervous system depend. Among these are hyperthyroidism, uræmia and diabetes.

3. **The somatic disease group** includes the mental disorders which are caused by the toxins produced by the microorganisms of the infectious diseases which are spoken of as the infective psychoses, and a second division of this group includes the exhaustive psychoses which are brought about by severe and prolonged illness, long-continued fatigue and privation — conditions which tend to diminish and deplete the vital and nervous power.

4. **The constitutional group** includes the very large number of mental diseases which are usually spoken of as “functional,” — diseases in which there are various symptoms of mental derangement, and yet the pathologist does not find changes in the structure of the nervous system which can explain these symptoms. The functional mental diseases occur for the most part in individuals who by nature or nurture have failed to receive those stabilizing qualities which enable one to unlearn and learn anew to adjust and adapt one's life to the changes and conditions which must be met in the course of human life and the march of progress. These individuals seem to be more than ordinarily vulnerable to the upsetting factors in their lives and mental disorders of various kinds are produced. Some of the precipitating factors of these psychoses are: The strain of close application to work, the stress of contest in the hustle of their daily lives, worry, jealousy, disappointment, grief, fatigue, misfortune, sudden shock, fright, isolation, unrelieved monotony, and certain vague longings and cravings which are insistent and insatiable.

GENERAL CLASSIFICATION

I. Organic Group.

Senile psychoses.
Psychoses with cerebral arteriosclerosis.
General paralysis.
Psychoses with cerebral syphilis.
Traumatic psychoses.
Psychoses with brain tumor.
Psychoses with Huntington's chorea and other brain or nervous diseases.

II. Toxic Group.

Intoxication psychoses due to alcohol and drugs.
Autotoxic psychoses.

III. Somatic Disease Group.

Infective psychoses.
Exhaustive psychoses.

IV. Constitutional Group.

Manic-depressive psychoses.
Involution melancholia.
Dementia præcox.
Paranoia.
Epilepsy.
Psychoneuroses.
Mental deficiency.

CHAPTER V

THE PREVENTION OF MENTAL DISEASE

For many, many years the chief duty and ambition of the physicians was to relieve suffering, to cure the sick, to restore the maimed and mend the mutilated. They practised "the healing art." When scientists discovered and demonstrated the causes of many diseases and the means and methods by which some could be eliminated and others controlled, medicine entered upon the second and more important epoch of prevention. In no branch of medicine are preventive measures more insistently needed than in that of mental diseases, where the crippling of unnumbered minds with the resultant loss to society, waste in industry, expenditure of vast sums of money for care and treatment, and the weakening of the race by the transmission of defective nervous systems, make this a social problem of exceeding importance. More obvious does this appear when it is known that much of mental illness could be averted or checked if prophylaxis had been begun in early years, or been applied when symptoms first appeared.

In some of the organic brain diseases, especially those due to senility and cerebral arteriosclerosis, measures of prevention are of slight value; in others like tumor and abscess, trauma and hemorrhage, while little can be done in the way of prevention except to increase and make more efficient the safeguards against physical violence, early diagnosis is very important for much may be effected by surgical treatment, and the removal of pressure very often means a restoration to health. The foremost cause of organic brain disease, the chronic infection of **syp**hilis, a disease which for years could

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not be named because of its too often shameful origin, is directly preventable.

To stop the spread of syphilis the Society of Social Hygiene and the Mental Hygiene Society broke "the conspiracy of silence," and began a forward movement to dispel ignorance and disseminate knowledge of the nature of this disease, the means by which it is contracted, the inescapable dangers of reckless and voluntary exposure, and the sureness of its blighting and destructive force both upon the individual who contracts the disease and the innocent women and children to whom it may be communicated, for syphilis is a disease which may be transmitted directly from parent to child. These Societies further sought by means of an educational program to teach the physiology and hygiene of sex, to create a belief in and a practise of the single standard of morality,—a pure life for men as well as for women,—to make the disease reportable by name as in the cases of small-pox, scarlet fever and other contagious diseases, as well as to provide remedial measures and make treatment compulsory, and to arouse public sentiment not only to demand legal measures for the suppression of prostitution and adequate punishment for the purveyors and patrons of this evil, but also to demand measures which would prevent young women from becoming prostitutes, by throwing additional safeguards around the young women of the working class and the large numbers of homeless and friendless girls from whom the ranks of prostitution are chiefly recruited. The records of the probation officers show that more than 50 per cent. of the girls who are placed on probation in the state of New York have been brought to court in the first place on account of inadequate and improper guardianship.

This work has been greatly advanced by the passage of a law in Congress, July, 1918, which provided for the appropriation of funds for combating the social diseases, and creating a Division of Venereal Diseases in the United States Public Health Service. Large sums of money have been and are being expended for treatment and for public

education which is being carried on by means of lectures, exhibits, photoplays and personal instruction.

Alcohol, which has been more potent than any other single factor in the causation of unhappiness, poverty, misery, accident, crime and disease, is, it is fervently to be hoped, eliminated from general use forever, since the "Prohibitory" Amendment to the Constitution became effective January 16, 1920.

The importation, manufacture, distribution and sale of the dangerous **habit-forming drugs** have also been brought under Federal and State control. These measures, supported by a public sentiment which demands and coöperates in their enforcement, should result in the eradication of the alcoholic and drug psychoses.

The **infectious diseases** are more and more being brought under control by laboratory research, scientific investigations, sanitary science and the application of serumtherapy. There are now available various sera and vaccines which will cure some and prevent others of the more serious infectious diseases. The increasing number of clinics and dispensaries where the best medical advice may be obtained free or at small cost, better housing and living conditions, improved working conditions, shorter hours of labor, more opportunities for recreation and the adaptation of work to those who are handicapped by physical weakness are among the measures of prevention already in force. As the infectious and somatic diseases are controlled and prevented, the psychoses which are produced by them will incidentally be prevented.

In the prevention of the functional mental disorders **prophylaxis** should begin early in life, for it is during the period of habit formation, in childhood and early adolescence that defects may be most easily remedied and efforts directed at prevention offer most promise of success. More attention should be given to the cultivation of mental health and the formation and development of correct mental habits which are of equal importance with the physical. Nourish-

ing food, pure water, fresh air, sleep, cleanliness and exercise are recognized as factors which are essential to the development of a strong body, while the factors which are essential to protect and strengthen the nervous system are many times neglected or misapplied, for children are exposed to unhappy, irritating and disquieting influences in their environment which are easily absorbed and frequently imitated. Children who are carefully guarded against the infectious diseases are far too often in no way protected from the "psychic infections" of their environment. Gloominess, peevishness, irritability, irascibility, anger, ill will and uncharitableness are, it sometimes seems, more contagious and surely more damaging than cheerfulness, patience, kindness, courtesy and unselfishness.

Children with neuropathic tendencies require special measures of training and education, and much more supervision than is necessary with children whose reactions are normal and healthy. They should not be too much shielded from and spared the small discomforts, physical hurts and disappointments which are common to childhood, but taught how to ignore or to endure them, and without too much complaining make the necessary readjustments which each sensation or experience demands. Too much sympathy and coddling should be avoided, for it is far better to help a child to use his own powers and learn to rely upon himself and so build up his mental and moral fibre. Especially should sympathy be judiciously given when it is inordinately craved and demanded. Too ready concession to the likes and dislikes and too free indulgence of whims, fancies and notions which very often are an indication of hypersensitiveness should be avoided, for these tendencies if not overcome in early life may in later years become a source of anxiety and mental distress. The attitude and example of parents, nurse, teachers and playmates are of the greatest value in correcting and conquering these inclinations and aversions, for in the early years of life the child imitates and reflects largely the attitude and behavior of those about him.

Tendencies to vacillation, indecision and doubt should be early combated, and the habit of making decision after due deliberation should be inculcated, together with the habit of not questioning whether the decision is right or wrong or the best or wisest, but accepting it and abiding by it. Frankness, openness and straightforwardness in meeting difficulties and solving them should be fostered and encouraged, and tendencies to sulk, to hold a grudge or bitter feelings should be eradicated.

Tendencies to violent outbursts of anger should be controlled by avoiding direct issues which precipitate such attacks whenever possible, and by meeting the situation in some other way, — by diverting the attention, or by explaining without threats or show of irritation or annoyance, why a definite course of action is necessary or best. By forethought and skilful management these undesirable tendencies may be greatly weakened and many times eradicated. When they cannot be prevented, fits of temper should be cut short in the beginning and the consequences of such episodes should be made unpleasant and unsatisfactory by such measures as being put to bed, deprived of play or banishment from the presence of others. Isolation for a period is a most effective measure when wisely employed. "In older children the habit of giving way to temper may sometimes be broken by inculcating the conviction that one who loses his temper makes a fool of himself, loses his dignity and excites the disdain and contempt of his fellows; the horror of looking ridiculous, of making a donkey of one's self, may be a most powerful lever in conquering a tendency to attacks of fury."¹

Most unwise and noxious is the practice of some thoughtless and negligent elders of discussing before children terrible events and harrowing experiences, for in early life imagination is so active that morbid impressions are received and permanently retained. Even more pernicious is the practice of

¹ Address: "Mental Hygiene for Nervous Children," L. F. Barker, M. D.

gaining obedience by threats of impending harm from policemen, bogey men, animals and so forth. Bravery is an instinct which should be encouraged and developed, and the utmost precaution should be taken not to arouse unnatural fears. All children are easily frightened, and the child who is predisposed to nervousness may be so terrified that lasting harm may be done. Fear of the dark or of being alone very often may be traced to an early threat or scare, unwise conversation or an ill-chosen story which imprinted on the plastic mind memory pictures so vivid that they persist for years and may cause incalculable suffering and distress.

In education these children should not be sent too early to school; neither should they be pushed ahead faster than they can comfortably go, nor urged into contests and competitions, nor led into experiences which are beyond their age and which they have no capacity either to appreciate or enjoy.

Play, work and study with other children rather than alone or with adults should be encouraged. Play is the natural employment of children and provides an outlet for emotions which crave expression and a healthful means of getting rid of impulses and instinctive tendencies in a relatively harmless way. To learn to act with others as follower or leader, to serve, to coöperate, to resent and maybe occasionally to fight represent natural healthy attitudes which are fundamental in the development of self-control and self-reliance, resources of inestimable value in the larger experiences of later life. It is, furthermore, during play that the most effective moral lessons may be taught. Truthfulness, honesty, unselfishness, generosity, patience, gentleness and courtesy are most easily acquired and cultivated by suggestion and example during play, while efforts directed through abstract teaching prove futile and unproductive. For older boys and girls attendance at playgrounds and membership in boys' clubs and the boy and girl scout organizations should be encouraged, for these agencies have proven a valuable means of controlling and directing the instinctive tendencies.

Children and youths whose mental strength has thus been conserved and cultivated will more easily meet and efficiently overcome the difficulties presented by the changes and readjustments which inevitably are a part of every life, and which too often prove to be factors which contribute to upset and impair the mental health. Correct mental habits formed in early years provide an asset of immeasurable value in the prevention of the functional mental diseases.

Work, the daily performance of some appointed task or duty which engages the time and the attention, is one of the most valuable means for the preservation and promotion of mental health, for "Education to idleness means education to nervousness." It is obvious that the work must be adapted to the ability of the worker, that its demands both for physical and mental strength must not be so high as to cause undue fatigue, worry or strain, nor so low as to cause dissatisfaction and humiliation, that it should be under healthful conditions and that the relations with the employer and workers should be congenial and pleasant. To feel the dignity of labor, to find the "joy in work," to receive its rewards both in satisfaction and material remuneration, to gain through daily association the comradeship of others who work, and to share in the loyalty which is fostered by common interests and ambitions, increases self-reliance and courage, and furnishes a valuable stimulus to healthful endeavor and activity. Nor should the effects of uncongenial work be overlooked or minimized, for feelings of bitterness, antagonism and rebellion are often created which tend to warp the ideas, crush initiative and ambition and paralyze energy and activity.

Industry is to-day recognizing the tremendous importance of having the work adapted to the worker, and medical examiners, psychologists and efficiency experts have set themselves the task of "fitting the man to the job," and thereby not only increasing production, but eliminating sickness, accidents and discontent by avoiding the occupational misfits and maladjustments of former years. More

and more it is being recognized also that hard work fits for play as well as rest, and more time and many more opportunities are being provided for recreation, amusement and diversion.

In the prevention of mental deficiency, **segregation** is recognized as a most important measure, for these individuals have not the mental qualities which make them valuable to society, and economically they are a partial or total loss, but especially because it is an established fact that this type of defective family increases at about double the rate of the general population, and feeble-mindedness is inherited, for parents cannot transmit to their children nervous and mental strength which is not theirs to give. Some states already have enacted laws which provide for the **sterilization of the socially unfit**,—the criminal, the feeble-minded and the incurably insane.

Compulsory education and medical inspection in the schools have brought to light the astounding fact that nearly 70 per cent. of the children of school age are physically defective and in need of medical and surgical treatment. Of this number it is estimated that about 4 per cent. are mentally retarded or defective, and for these special classes and schools must be provided where special training can be given to fit them for life. The psychometric tests have been a valuable means of disclosing the subnormal child.

It has been demonstrated that children who may be retarded one, two or three years can by special training and instruction become practically normal, although they will always be a little slow. Those who show a retardation of more than three years can with proper supervision become manual workers and therefore partially or wholly self supporting. Too often because of pride parents will not acknowledge this condition and refuse to allow or provide the special training until it is too late. No group in society stands more sorely in need of preventive measures, for statistics prove that these subnormal individuals are unable to control those inherent tendencies which lead them in so great num-

bers to become confirmed alcoholics, drug addicts, prostitutes and perverts, delinquents and criminals.

+ Mental hygiene does not limit its activities to the care of those who are sick and the prevention of disease in those who are threatened, but it has also the broader function of increasing the mental health of those who are neither already ill nor threatened with illness. One of the most important and forceful agents in this field is the **well-trained nurse**. Her training enables her to discover slight deviations from the normal in behavior and personality and to know that seemingly insignificant peculiarities may be the forerunner of grave mental disturbance. She knows, also, how to call attention to these matters without giving offence, and cognizant of the value of early treatment, can urge consultation with a physician skilled in disorders of the mind or a visit to hospital or clinic where advice may be obtained. She may also be able to discover difficulties in the patient's home, in his work, his associations and recreations which contribute to bring about and prolong his illness, and she may be able to make changes and readjustments which will remove and eliminate the disturbing factor.

She is also frequently in a peculiarly advantageous position to do good to the whole family. She can make suggestions as to improvements in hygienic conditions, about the food, about the clothing, the education of the children, and changes in the environment which may be advisable or necessary, and what she says is invariably respected. Parental difficulties and conflicts are frequently first disclosed to her, and she may be able to make suggestions for readjustments which will relieve the stress and strain and promote the health and happiness of the whole household. Her circle of usefulness is ever widening for neighbors hear of her helpfulness and they too desire the beneficial effects of her visits and ministrations.

CHAPTER VI

QUALIFICATIONS FOR MENTAL NURSING — SYMPTOMS OF MENTAL DISEASE

The successful treatment of mental illness depends so much on good nursing, and so much of the nursing is the ready and prompt application of measures which the symptoms make evident, that it is obvious that mental nursing demands special qualifications and fitness, **special training and experience**. The nurse who will be most successful in understanding these patients and in dealing with them will be the one who brings to her service not merely the special knowledge and skill acquired by training but also the education, culture and social accomplishments which have been acquired in school and college, by reading, study and travel, and in the broader school of life. She must be intelligent, for no form of nursing makes such constant appeals to the intellect, or demands closer observation, more accurate reasoning, prompter decision or quicker judgment. She must have acquired full mastery of her own emotions if she would most effectively strengthen those with weaker wills and reënforce their efforts of self-control. She must be more than ordinarily capable, versatile and resourceful if she would lead and direct the activity of those whose minds are weakened and distorted by disease.

Mental nursing is far more difficult and exhausting than general sick nursing, arduous as that may be, for the nurse must spend long hours intimately and constantly in the presence of the patient who may be in the very depths of despair, or whose mind is filled with sordid and unwholesome thoughts, or whose behavior is perverted in strenuous and many times unpleasant ways, and out of her experience and training she

must diligently make effort to substitute useful and invigorating emotions for those which are depressing, pure and ennobling thoughts for those which are unwholesome and debasing, and direct the activity into channels of helpfulness, usefulness and industry. This is a task which calls for the full use of all the powers of mind, sympathies of heart and skill of hand which a nurse has to offer.

The observation of symptoms in mental disease presents many difficulties, because of the not infrequent lack of co-operation and inability of the patient to accurately express them. Physical symptoms must not be overlooked, for very often an exacerbation of the mental symptoms is traceable to some disordered physical function, and some forms of mental illness result directly from imperfect or deranged function of some other part of the body. Because of a dulling of sensation some physical condition which would cause great suffering to the sane person apparently produces no discomfort, while on the other hand slight and trivial conditions are so exaggerated that they seem to produce almost unbearable pain and wretchedness. The nurse must learn therefore to discover symptoms and conditions of which the patient never complains, and to discriminate between symptoms which are real and those which are feigned or imagined.

The temperature is subject to many variations. Inasmuch as a good deal of the heat of the body is produced in the muscles, overactivity will cause an increase in the body temperature, while a state of sadness and inactivity tends to lower the temperature below normal. A very high temperature, not associated with infection or exhaustion, may be produced by intestinal intoxication, and is quite promptly reduced by enemata. A continued elevation, even of one degree, must not be disregarded, for many mental patients develop tuberculosis; and typhoid fever, diphtheria and other infectious diseases are not uncommon occurrences in mental hospitals. Unless the patient has been proven to be perfectly trustworthy the temperature must not be taken by mouth, for the thermometer is easily

broken and the pieces of glass may be swallowed, or the thermometer may be pushed down the throat and cause choking, or swallowed without being broken. When the temperature is being taken per rectum the thermometer must always be held in position by the nurse, and under no circumstances should the patient be left alone with it.

The pulse also shows many variations. A sudden emotional disturbance, fear, surprise or joy may hasten it, and sudden anger or agitation may make it irregular as well as rapid. In depressed states the pulse is usually slow. In some functional diseases the heart action may be greatly increased and the pulse rate may range from 100 to 150 without a corresponding elevation of temperature. This condition is shown in hyperthyroidism. A continued elevation of temperature and a persistently high pulse rate together with rapid respirations may be the indication of exhaustion or other serious condition, and the patient must be kept under careful observation.

The respirations are less reliable, for many nervous patients breathe as rapidly as sixty times a minute or the rate may be very much decreased. Frequent sighing respirations are quite common in neurotic individuals. However, dyspnoea upon slight exertion, when lying down or when associated with pain must always be regarded as an important symptom and promptly reported to the physician. **Cheyne-Stokes respirations** frequently occur in disorders of the central nervous system, and must be looked for and reported.

Nausea, vomiting and headache are significant symptoms and should be carefully observed. The character of the vomiting should be noted, whether it is accompanied by nausea or occurs independently of it, whether it is of the projectile type and when it occurs, whether at irregular intervals or immediately following meals. The character of the headache should also be noted, whether it is dull, throbbing or painful, and where in the cranium it is most acute.

Loss of appetite when one has been eating well, **languor**

when one has been active, **loss of weight** and **anæmia** always are important indications of a lowering in the general condition. Each patient must be thoughtfully observed and peculiarities of conduct, attitude and appearance noted, for owing to the derangement of mental function these patients are more unlike than a group of physically ill patients would be.

It is, therefore, in the observation of **mental symptoms** that nurses who have the care of patients suffering from nervous and mental disorders must be especially proficient, and therefore must prepare themselves studiously, in order to recognize and understand them, for mental symptoms are more obscure and less tangible than physical symptoms, and many which are of great importance may be overlooked by a nurse who is not familiar with mental patients and their characteristics. Some symptoms are transitory and some others change, and some are cleverly masked and suppressed when the physician is present, so that it devolves upon the nurse who sees the patient in many situations and under various conditions to furnish as full and accurate a report as possible. In recording or reporting symptoms the nurse should state exactly what is said and done by the patient rather than the condition she thinks the symptoms indicate. If the patient stands for a long time gazing into space, listening, smiling and muttering, he is undoubtedly having hallucinations of hearing; but it is of much more real assistance to the physician to describe what the patient does and says, if the conversation can be heard, than to state that the patient has auditory hallucinations. Then, too, although the nurse may carefully make her observations, she may not always interpret the symptoms correctly and this might be misleading. If a patient seems worried and anxious, perplexed or apprehensive, find out if possible what is operating to disturb the peace of mind, and record this rather than the mere statement that the patient appears anxious, etc. Not infrequently does it happen that the nurse is able by tactful questioning and kindly, sympathetic

ministrations to ascertain what the disquieting ideas and feelings may be, even though the patient has persistently denied their presence or refused to reveal them. This is of great importance, for when the causes of mental conflicts are known, the physician is able to discuss them freely with the patient, to explain their origin, nature and import, to give suggestions how to correct them and to make the necessary readjustments, which afford great relief and many times mark the beginning of permanent improvement.

In the course of mental disease all the functions of the mind, thinking, feeling and acting, may be changed, impaired or lost, and in the following pages the disorders are arranged and defined under the headings which are most conveniently used in observing and describing symptoms.

I. DISORDERS OF BEHAVIOR OR CONDUCT

Inasmuch as the physical organism is the instrument of the mind and the body becomes the expression of the mind, any derangement of the mental functions is soon manifested in the **behavior**. Observers of the mentally ill agree that the intellectual defect is not the first abnormal symptom in mental disease, for the memory may show no impairment, the patient may be able to converse brilliantly, to argue convincingly on many questions, give no sign of hallucinations or delusions, and yet there is evidence that he is changed because the behavior is different from what it formerly was. These changes may be shown in all sorts of ways and nurses and those who have the care of the mentally ill must ever keep in mind that one whose language has been refined and whose conduct has been exemplary, may, when the mind is deranged, become vulgar, obscene and profane, and never should character be judged by its manifestations during mental illness.

The **psychomotor activity** may be increased or diminished in mental disease. Increased activity is shown by restlessness, constant moving about or acting in an excited, destruc-

tive or violent manner. These activities which are the responses to the increased mental activity may be accompanied by talking, shouting, whistling, singing, scolding or threatening. When the activity is diminished there is much difficulty and slowness in executing movements, and in extreme cases the motor activity may be suspended. The speech is very slow, and may be monosyllabic or suppressed and the patient remains mute.

Impulsiveness is shown by sudden acts which are the responses to uncontrollable thoughts or feelings. These responses are in no way premeditated, for the idea barely comes into consciousness and is immediately transformed into action without thought of the consequences. Unprovoked attacks upon other patients and upon the nurses are frequently of this nature, as also are the hazardous and dangerous activities to which the patient is impelled frequently by hallucinations.

Suggestibility is a condition in which the activity is determined by impressions or suggestions received from others. There are three types: **Echolalia**, the tendency to repeat the exact words of another; **echopraxia**, the tendency to repeat or imitate the movements of another; and **cataplexy**, the tendency to hold or maintain by muscular rigidity a given position. If the arms are extended over the head, they will be held in that position for a very long time, it may be all day, unless some one changes them. Some patients who show this tendency can be molded or fashioned into almost any attitude and the positions are maintained indefinitely (*Cerea flexibilitas*). There is believed to be a form of muscular anæsthesia present and the position of the various parts of the body is apparently unknown and unfelt.

Negativism is the tendency to respond to a stimulus in a way which is the reverse of the usual reaction. If a patient is told to put his tongue out, he does the exact opposite, shuts his lips tightly to keep his tongue in his mouth. Negativism may also be shown by resisting baths and treatment,

the taking of food, exercise, etc., and may be caused by illusions and hallucinations in which voices tell him not to act, or that the food is unfit to eat, etc.

Stereotypy is the performance of the same acts in the same way over and over, walking in a limited space, striking the chest, shaking the body, rubbing and pulling the hair, etc.

Mannerisms are peculiarities of conduct shown in the ordinary simple movements or activities, grimaces, queer or bizarre movements, baby talk, etc. These also may be the responses to hallucinations.

Aboulia is shown by hesitation and indecision. Even when a strong stimulus is applied, some real incentive for action given, no response takes place. A person may be unable to dress because he cannot decide which arm should first be put into its sleeve, or whether the stocking should be first drawn on to the right or the left foot. The same difficulty arises whenever a choice or a decision, however trivial or important, has to be made. The power to determine action (volition) is so lacking or diminished that the patient is unable to make decision, and it usually has to be made for him by the nurse or some other person.

The **Behavior Chart** on which are recorded the spontaneous and required behavior must be kept with care and accuracy. Observation of the various activities must be thoughtfully made, for the chart provides the physician with information which is helpful in making diagnosis, and shows an improvement or regression in the mental state just as definitely as a record of the temperature, pulse and respiration which approaches the normal shows an improvement in physical condition.

II. DISORDERS IN THE STREAM OF THOUGHT

Flight of ideas is a term commonly used in psychiatry to indicate a hastening in association. The goal idea changes rapidly because the direction of thought is so constantly changing. The tendency is to jump from one topic to

another which is connected or associated with it in some way. A single word or syllable or some element of the idea may furnish the stimulus. There is also frequently present a tendency to play upon words and to rhyme.

Distractability is the disposition to change the direction of thought frequently because of external impressions. A word, a sound, a passing object which gains the attention will interrupt the train of thought and abruptly change its course. Sound is especially likely to be distracting.

Retardation is a term which is used to indicate a slowing or a delaying of association. Ideas are developed very slowly and decisions and judgments are formed with difficulty.

III. EMOTIONAL DISORDERS

Disturbances in the emotional sphere are among the early symptoms of mental disease. These disturbances are shown by an increase or diminution in the intensity of the feelings.

Exaltation is a morbid state of happiness which is not warranted by the circumstances or conditions. This state may vary in degree of intensity from an exaggerated feeling of satisfaction and well-being (euphoria) to elation. The patient is happy, joyful and exuberant, is usually loquacious, and laughs, sings, dances, and everybody is agreeable and everything is beautiful.

Depression is a morbid state of unhappiness which is not warranted by conditions or surroundings, and may vary in degree of intensity from a feeling of sadness to deep melancholy. The patient looks gloomy and dejected, admits he feels "down-hearted," sighs, is tearful, worried and anxious about many things which concern himself, takes no interest in what is going on and wants to be alone.

Deterioration is characterized by weakness of the emotional feeling, a state of indifference and apathy in which the patient shows no change of mood or feeling and events or happenings which usually produce feelings of surprise, pleasure or displeasure fail to arouse the customary response.

Other changes in the emotions are shown by increased impatience, irritability and irascibility, and the persistence of feelings of suspicion, perplexity, apprehension, timidity, fear, etc.

IV. ABNORMALITIES IN MENTAL CONTENT

Trend is a term which is applied to any set or group of ideas which follow a particular line or direction, *i.e.*, the ideas may all tend to have a sexual or religious bearing, or they may be of reference or persecution, and the patient is said to have a religious trend, a persecutory trend, etc.

Fixed ideas are those which are constantly forcing themselves on the attention, and cannot be banished from the mind for any considerable period of time, and so tend to influence conduct. All other ideas, experiences, and feelings tend to be associated with it, and utilized for the realization of it.

Obsessions are imperative ideas which possess the mind and control the activity, often against desire and will. The patient cannot be persuaded that the particular acts to which these ideas urge him need not be done, and he will walk several blocks to avoid passing a certain corner or will wait for hours or walk miles to avoid taking a street car whose number may contain a certain numeral, etc.

Compulsions are ideas which seem to come from without and arouse a feeling of necessity to do certain acts, and much relief is experienced when the act takes place. Some voluntary act like closing a door, crossing a threshold, picking up an object, taking off a garment, etc., is performed a series of times, usually three and sometimes more. When the performance is once begun it is continued the definite number of times, and great unhappiness ensues if there is any interruption in the series. The more serious acts of taking property which belongs to another without regard to its value or utility (kleptomania) or of setting fire (pyromania) are also examples.

Phobias are morbid fears. These may be of the dark,

of being alone, of closed rooms, of open spaces, of high places, of crowds, dirt, light, bridges, etc. The patient very often fully realizes the morbid nature of these fears but is unable to control them.

Delusions are false beliefs which cannot be corrected by argument or experience. They may be improbable, impossible, inconsistent, absurd and fantastic, and are usually grouped as belonging to two types, the depressive and expansive. Among the depressive delusions are: Delusions of persecution, in which the patient believes himself to be the object of repeated acts of cruelty or annoyance; delusions of self-accusation in which he accuses himself of having committed some wrong or immoral act; delusions of reference in which he believes that everything which is transpiring about him is a direct allusion to himself; delusions of misfortune in which he believes that ill luck, calamity, disaster or accident have befallen him; and hypochondriacal delusions in which he believes that he is suffering from grave bodily disease. The expansive delusions include the "delusions of grandeur," in which the patient believes that he has great wealth, possessions, strength and influence. He may believe he owns all the banks, has billions of dollars, mansions of gold, a thousand automobiles, the beauty of Apollo, the strength of Samson, the authority of God and power to rule heaven and earth, for in fact there seems to be no limit to the extravagant expression. The opinion is held that these delusions represent in a florid form the unconscious desires of the patient.

Illusions are misinterpreted sense impressions. There is always an external stimulus to furnish the impression, but it is interpreted falsely, as for example, the cord of a bath robe which is detached from the garment may be interpreted to be a snake, or the branch of a tree swaying in the wind may be mistaken for a beckoning hand, or the sound of a whistle may mean the call of a human voice. The normal mind at times misinterprets sense impressions, but it soon corrects the error. In mental disease the illusion per-

sists, is believed in and consequently influences behavior. There may be illusions of all the senses, but those of hearing, sight and touch are most frequent.

Hallucinations are false perceptions. These are of purely mental origin for there is no recognizable external stimulus present. A patient will see persons, animals and objects in the room when none are present, will hear voices and reply to them when no sound can be heard, feel vermin crawling over his skin, feel the heat of fire which he thinks is consuming his bed, etc. Normal persons do not have hallucinations, but they occur frequently in deranged conditions of the mind, and like illusions are held to rather tenaciously, and are believed in so that the conduct is often dominated by them. The most common hallucinations are of hearing, sight and touch.

V. DISTURBANCES OF CONSCIOUSNESS

Clouding of consciousness is a condition in which external stimuli of the ordinary strength are not comprehended.

Delirium is "a temporary general disturbance of consciousness, a perversion of the intellectual and perceptive faculties, characterized by confusion, by more or less transitory delusions and fleeting hallucinations, accompanied by disordered, senseless speech and muttering, and motor unrest." Delirium may vary in degree of severity from a mild wandering type in which the patient is incessantly engaged in disjointed conversation with imaginary persons or muttering to himself, with comparatively little motor activity, to an excited form characterized by extreme restlessness and violence, shouting and attempting to escape from bed or room and from the tormentors created by his imagination who annoy and harass him, or struggling with the imaginary enemies and those who try to limit his activity and prevent his escape. The mood is variable and may be happy, sad, anxious, apprehensive or fearful. Delirium may develop as a symptom in the infectious diseases and toxic conditions arising from disordered physical function, in alcoholic and

drug poisoning, in conditions of exhaustion and senility, and following accidental injuries, trauma and surgical operations.

Stupor is a profound disorder of consciousness in which ordinary impressions are not comprehended and voluntary activity is suspended. The impression may be received normally but because some inhibitory process interferes with the usual mechanism no reaction takes place. The patient is aroused from this condition only by the strongest stimuli. The pulse is slow and small, the temperature is subnormal, the skin is dry, the extremities cold, the mouth is filled and overflowing with saliva, the eyes may be open but the mind does not perceive, and no voluntary movements are made.

VI. DISTURBANCES OF INTELLECTUAL FUNCTION

1. **Orientation** is disturbed when the patient is unable to apprehend correctly time, place and persons. He is then disoriented, for he is not able to give the day, the month and year accurately, does not recognize his surroundings and the people about him, or misidentifies them.

2. **Memory** may be impaired or lost. The defect may be one of retention which is shown by inability to hold or keep in mind sense impressions which have been received, or it may be a defect of recall in which the processes of association are involved and remote events and experiences are not brought back into consciousness readily or at all. Failure to retain impressions may be due to want or lack of attention to incoming impressions, so that they are only dimly perceived, or it may be due to interference of other and stronger impressions which weaken them, so that they are only faintly recorded in mind and are soon obliterated. In old age, when because of definite changes in the tissues of the brain there is a diminution or loss of plasticity, this disorder is often prominent. The same questions are asked over and over, and the identical answers repeated again and again satisfy for the moment only and seem to make no impression.

Even events which are of consequence in the life of the patient may be retained no better. A visit from some relative or friend for whom the patient has repeatedly asked, makes no lasting impression for it is out of mind almost as soon as the visit is ended, and a very short time afterwards the patient has no recollection of it. Usually in these cases his memory for remote events is unimpaired, for impressions have been retained and can be recalled.

Failure to recall or recollect may be a temporary defect, due to incomplete or faulty associations, and when the right connections are made experiences are brought back into consciousness in their entirety and often vividly; or it may be a permanent disorder due to a complete interruption of connections and associations and the patient is unable either to recall experiences or to recognize them as belonging to his past when they are recalled to him. **Amnesia** is a term which is applied to this condition.

Paramnesia has been defined as an "illusion of memory," for the person is unable to distinguish between real and imaginary memory. This may be due to faulty observation and attention whereby impressions are not clearly perceived and are therefore indistinct and become confused in memory, and when recalled the details of one experience become confounded with those of another. This condition is present in normal individuals, for some of the untruths of every day are of this type, and in some mental patients the condition is greatly exaggerated and they falsify in the most extraordinary manner, relating not only what is not justified by the facts, but what is grossly contradictory to the truth.

Fabrication is the invention or creation of fictitious events in order to make explanations adequate. When memory does not serve and details and intervening events are not recalled, the story or recital is made complete by weaving in fancied or imagined events to fill the gaps. Fabrication is often stimulated by questions, for the patient quickly grasps the idea contained in the question and makes it a part of the experience.

Aphasia is a term which is applied to certain disturbances of function in the cerebral centres which have to do with language. These disorders are the result usually of some lesion which either interferes with or destroys the function of those centres where impressions of written and spoken words and their expression are stored in memory, and may be either sensory or motor. **Sensory aphasia** is shown by inability to comprehend spoken and written words. The patient can hear and can see, but does not understand. He is like one who hears a foreign language which is unfamiliar, or looks at symbols whose meanings are unknown; he cannot understand because there are no images in memory which correspond to what he hears and sees, and so he cannot interpret them. The ability to recognize objects or recall their uses may also be lost. This disorder is not uncommon among the aged, and articles and objects of everyday familiarity are sometimes put to most unusual and unsuitable uses.

Motor aphasia is shown by inability to speak or to write words with which one has been familiar. The patient knows well what he wants to say or to write and recognizes the word when it is suggested to him, but because the memory of muscular control and coördination required to speak or to write the words is lost, he cannot express them. He has been likened to a banker who wants to open his safe and has lost the combination. ("Essentials of Medicine," Emerson, p. 188.)

3. **Thinking.** The processes involved in thinking may be so interfered with or impaired that any real mental activity seems to require unusual effort and strain, and concentration becomes especially difficult. This is spoken of as **mental tension**. This disorder is usually brought out by the physician in the mental examination by asking the patient to write spontaneously and to dictation, and to make some of the more difficult calculations which test the ability to think and to concentrate.

4. **Intelligence** may be impaired or defective. This condition is made evident by a limited or inadequate grasp

in matters of general information, facts of common knowledge and the special knowledge of the environment, occupation, trade, etc. This condition may be due to lack of educational opportunity and training, to the psychosis and to constitutional defect. When the impairment is confined to the period of the psychosis, the general knowledge gained before the onset of illness may be good. When the defect is shown to be constitutional it is, of course, permanent, and is termed **mental deficiency**. The various psychometric tests are largely employed to disclose the degree of deficiency and to establish the permanent intellectual level.

VII. JUDGMENT

Impairment of judgment is shown by lack of insight. The patient fails to have any realization of his condition, and when gravely ill may declare he is all right, and deny that he has any trouble in any way.

CHAPTER VII

THE ADMINISTRATION OF FOOD — RELIEF OF INSOMNIA — PREVENTION AND TREATMENT OF BED SORES — PREVENTION OF DISTENTION OF THE BLADDER AND COLON — MANAGEMENT OF CONVULSIONS — HANDLING OF EXCITED PATIENTS AND CARE OF SUICIDAL PATIENTS

Early in the care of patients mentally ill, the nurse is beset with conditions and situations whose import must be quickly recognized, and which must be promptly relieved, many times without the assistance which a physically ill patient can always give, and frequently against the strong opposition of the patient. Some of the more difficult conditions and situations which confront, perplex and test the ingenuity and resourcefulness of the nurse, have to do with the administration of food, the relief of insomnia, the prevention and treatment of bedsores, the prevention of distention of the bladder and colon, the management of convulsions, the handling of excited patients and the care of those with suicidal tendencies.

The administration of food. One of the most important duties of the nurse is to have the patients under her care take a sufficient amount of nourishing food. To accomplish this is often a difficult and perplexing problem, for many mental patients will not eat, and resist all efforts of the nurse to have them do so. This does not, however, lessen her responsibility, for every patient must take a reasonable amount of food, unless orders to the contrary have been given by the physician. She should find out, if possible, the reason food is refused, that she may better know how to proceed and what to do. Often it is due to delusions

that the food contains poison, or the patient may feel that he is unworthy to have it, or that he has no money to pay for it, or that it belongs to others and by taking it they will be deprived ; or it may be because of hallucinations in which he hears voices which tell him not to eat for many and various reasons. Sometimes he is too busy to eat, the pressure of activity crowds out the desire for food, and other interests so absorb the attention that it cannot be diverted long enough for him to take a proper amount of nourishment. Some patients suffer from aboulia and are unable to decide what to eat first and, therefore, eat nothing unless the nurse stands by and makes decision as to what must be taken. A nurse soon learns many ways in which to meet the arguments against eating and to interpret the persistent refusal to eat, and by persuasion, patience and perseverance is able to accomplish much in the way of results. Sometimes a little diversion like bathing the face and hands, shaking and turning the pillows, smoothing the bedclothes, reading from the daily paper and magazines, conversing on some interesting subject and soft music on the phonograph may be employed to distract the attention and make the patient more ready and willing to eat. Even against strong desire many patients can be persuaded to take what the physician has prescribed they should eat, and will accept the ordeal as a task which must be performed as a part of the daily routine of treatment. Sometimes the tray may be left beside the bed, or the food may be left on the table and, when the patient thinks no one is looking, he will hastily make way with all that has been provided.

The delusion that the food contains poison may be met, when argument and persuasion fail, by serving both the patient and others from a general supply in the presence of the patient, by tasting each service and by permitting the patient to exchange plates with some other patient. The eggs may be cooked in the shells and the potatoes cooked in their jackets, and the patient be permitted to open and prepare these for himself. One patient, while

acutely ill, would only eat eggs which had been boiled, and which he had taken from the water in which they were cooked.

Those who will not voluntarily take food must be fed in the same manner as weak, helpless or handicapped patients are. Here again when each bit of food is placed in the mouth by the nurse it is oftentimes a very difficult matter to get the patient to take a sufficient amount of food, and much time and patience are required for spoon feeding. If they resist and will not open the mouth, rubbing the lips with a spoon or holding a glass or cup forcibly to the lips and wetting them, or inserting between the lips a waxed paper, or glass drinking tube, through which the liquid may be drawn into the mouth, will sometimes help to accomplish results. A feeding cup may be used and the spout placed in the cheek, rather than between the teeth where the tongue could more easily close the opening and check the flow of the liquid. A small quantity of the fluid is then poured at a time, and at regular intervals, for it is important to keep up the act of swallowing. After beginning to swallow, some patients will take an indefinite amount of nourishment. If the fluid is held in the mouth, it may be necessary to pinch the nose and so produce deglutition. The nurse must try many ways because the same methods cannot be employed with all patients. The behavior of the patient must be her guide, and a quick, resourceful nurse will seize upon the least opening and make the most of the opportunity. When persuasion fails and all other means are resisted, feeding by stomach or nasal tube becomes necessary. When the stomach tube is used precautions against biting the tube must be taken and a mouth gag is often needed. For this reason the nasal tube is more generally in use.

Nasal feeding. The feedings may consist of milk, eggs, sugar and salt; strained cereals mixed with milk and beaten egg; concentrated broths and purées of vegetables which have been made thin by the addition of milk, cream, etc.

These foods contain all the food principles which are needed to build up the tissues and supply energy in a form which is easily taken and easily digested, and they leave little residue. The character of the feeding, the quantity and the intervals are always prescribed by the physician. Some patients are tube fed for months and the nurse may be intrusted with the treatment, but the physician always gives the first and usually several subsequent feedings.

Prepare the feeding prescribed at a temperature of 98° F., taking care to strain it so that no particles or shreds will clog the tube. Further, make ready the tray with towels, tumbler, glycerine in a medicine glass, any medicine which is to be given, the tube boiled and placed in cold water, a basin to be used in case of regurgitation, pitcher containing the feeding and a small pitcher of water.

Place the patient in the dorsal position, with head and shoulders slightly raised on a pillow; place the arms under the bedclothes beside the body, and tuck in securely; place a towel across the chest and under the chin to protect the bed, and a strap sheet across the knees, if the patient is resistant, to prevent kicking; place a folded towel about the head, grasping it firmly behind, or to one side, to control and steady the movements of the head. If the patient is very active the forearms will have to be held to avoid interference with the tube. Do this by keeping them under the bed covers and so lessen the dangers of discoloration from direct pressure.

Procedure. The end of the tube is dipped in glycerine and inserted in the nostril. If the breath is held, induce the patient to swallow, when the tube may be further inserted. If such resistance is met, examine the mouth, for the end of the tube is sometimes turned in the throat and brought forward into the mouth. To make certain it is in the esophagus and not in the trachea, note the color of the face, and place the end of the tube in water. If air bubbles appear it is in the trachea and should be removed instantly. In mental disease the reflexes are many times diminished and

coughing does not always occur when a foreign body is in the trachea, and so it is necessary to make other tests. When the tube is evidently in the stomach, a little water is first poured in to clear it of mucus, then slowly the food is poured in, taking care to exclude the air; whatever medicine has been ordered is then given, after which the tube is withdrawn slightly and a little water poured in to clear it. It is then pinched or bent so that any fluid which may remain in it does not flow out, withdrawn quickly and placed in a towel. The nostrils are cleansed and the patient kept quiet until such time as all danger of regurgitation is over.

The egg-nog, or whatever the feeding may be, should always be offered the patient in the usual way before making preparations for the forcible feeding, or it may be left for a little while where the patient can get it and he may conclude to drink it voluntarily. Care must also be taken that he does not pour it over his head or into his bed.

Untidiness in handling food is characteristic of patients who show deterioration, and it may also be a response to delusions or hallucinations. In these cases the number of dishes on the table or tray should be limited, and only a small amount of food placed before the patient at a time. The tendency to use the fingers to carry food to the mouth can be corrected by placing the fork or spoon in the patient's hand, and firmly, but kindly, insisting that it and not the fingers must be used. Spoon feeding for several days may help to break up untidy habits at meal time.

It sometimes is necessary to restrict the amount of food, for some patients have voracious appetites, and gorge themselves almost to suffocation. Then, too, if more than enough to satisfy the appetite is given, some will secrete it on their persons and later transfer it to their beds and other hiding places which may be most unsanitary. It is far better to serve small portions and repeat the service than to place the full amount before the patient at one time.

The food should be carefully prepared. Potatoes should be mashed or cubed, the meat cut in small pieces, the bones

removed from fish and the pits from fruit, for a good many patients do not masticate their food and eat very rapidly, and large pieces occlude the pharynx, sometimes with fatal result. It is usually better to spread the butter on the bread and so avoid the not infrequent occurrence of having the patient rub the butter into the hair. Soup, tea, coffee and cocoa must not be served too hot, for serious burns have resulted when sensation has been so diminished that the temperature could not accurately be felt. These precautions apply chiefly to those cases where the utmost care must be exercised to prevent accidents, for the majority of patients are orderly and tidy when at table or partaking of food.

After every meal the silver must be carefully looked over and every piece accounted for. For obvious reasons patients with suicidal and impulsive tendencies are not permitted to have knives, and sometimes forks, the tines of which can be broken. For these cases a dessert spoon is better than a teaspoon which can be more easily broken.

The patients should be **weighed regularly**, usually once a week, and the weight recorded on a chart. Sometimes this is kept in curves and shows at a glance the gain or loss in weight which is so often an indication of improvement or regression in the nervous and mental condition.

Insomnia is a common symptom of nervous and mental disorders, and to combat it is one of the most troublesome and baffling problems of the nurse. Failure to obtain a necessary amount of sleep tends to derange the bodily functions, to increase the mental tension, and may even cause an elevation of temperature. When insomnia is persistently present, it becomes a danger signal, for it many times presages delirium, mania and exhaustion, — conditions in which the life of the patient may depend upon the factor of sleep. Mental excitement, grief, worry, pain, discomfort produced by undue cold or heat, indiscretions in diet and excessive fatigue, or the lack of it, are among the common causes of insomnia.

To frustrate and overcome a tendency to sleeplessness often taxes the art and skill of the nurse to the utmost. The first step in the struggle is to remove the cause if possible. Sometimes this can be speedily accomplished, and at other times all measures seem to fail. Toothache or earache, of which the patient never complains, and the discomfort produced by an over-distended bladder may be direct causes and should be kept in mind. Plenty of fresh air, absolute quiet, dim lights or darkness, a comfortable position in bed, the pillow or pillows adjusted to the right height, the covers not too heavy, but offering sufficient protection and warmth, a hot water bag applied to the feet and cold compresses to the forehead and over the eyes, a small ice bag placed at the back of the neck, a fresh, cool pillow, stroking of the forehead or forearm in slow rhythmical movements, brushing the hair in long even strokes, a warm bath, a cold pack, a tepid sponge, gentle massage and stroking of the back at bedtime, followed by a cup of hot broth, milk or cocoa, reading from a magazine or book of poems, or telling a story in low, droning tones, playing a nocturne or soft music, and singing a quiet, restful hymn or song, are some of the measures a nurse may take to induce sleep. Exercise in the open air to a point where mild fatigue is reached is in many cases a most beneficial means of promoting sleep.

If, after a few hours of sleep, the patient awakens, a light meal of bread and butter sandwich, or crackers and hot broth or cocoa may be given, and many times proves effective in producing more hours of sleep.

Hypnotics should be avoided because a dependence upon them is so easily acquired, and many of them produce after-effects which are not helpful to the patient's condition and must be gotten rid of. Sulphonal, trional veronal, chloral and paraldehyde are the drugs most commonly given, but these should not be resorted to until all other means have been tried and fail, and it must be remembered that to secure the best results from the hypnotic

every accompanying condition must be made most favorable.

In some nervous conditions inability to sleep causes the patient much worry, and this tends to increase his sleeplessness. As a rule patients sleep much more than they think they do, even though they make astounding statements to the physicians that they have not slept at all for nights and days. In these cases it is better to avoid talking about the subject, except to assure them that they will soon, or may be already, getting a sufficient amount of sleep, and in this way show them that there is no cause for worry or anxiety.

Bed sores are likely to occur in patients who are long confined to bed, or who are restless and over-active while in bed, in emaciated cases in whom the nutritive processes which take place in the body are faulty, in cases of paralysis where one position is long maintained and the skin is kept moist from incontinence. The most common causes of bed sores are pressure on a part, and friction between two surfaces. Continued pressure diminishes the supply of blood to the part and the vitality of the skin and tissues is thereby lowered. The parts most exposed to pressure are the lower back, the hips, the shoulder blades and the heels. The most common places where sores from friction may occur are the inner surfaces of the knees and the elbows; the back of the head and the ears may also become sore if there is long-continued and marked restlessness. In patients who suffer from some marked degree of malnutrition as shown by emaciation, the slightest pressure will sometimes produce a reddening of the skin which soon becomes pustular and rapidly spreads to the tissues which have little resistance, and soon a considerable area is involved and breaks down. This form is very difficult to prevent and much more difficult to heal.

The **first symptoms** of bed sores are a reddening of the skin and the complaint of the patient of a burning or stinging sensation. The nurse should not depend solely upon this

latter symptom for some patients are not conscious of the discomfort, but should daily make careful observation and examination to ascertain the condition of the skin.

The preventive measures consist in relieving pressure by frequently changing the position of the body, and by the use of air cushions, or by rings and pads which the nurse can make. The bed should be kept free from crumbs and wrinkles, the draw sheet and rubber sheet should be drawn very tight and kept smoothly in place by tucking far under the mattress where the weight of the body will hold it. The bed gown should be kept well drawn down around the feet and not allowed to make ridges or folds which would produce pressure. The skin must be kept absolutely clean by frequent bathing with hot water and soap, drying thoroughly, applying alcohol and giving friction to stimulate the circulation. If the skin is moist a dusting powder which is drying in character, as boracic acid and bismuth in equal parts, or stearate of zinc, should be applied. If the patient suffers from incontinence the skin should be bathed frequently and zinc oxide ointment well rubbed in. Specially absorbent pads should be used for these cases and frequently changed.

Treatment. If bed sores develop in spite of the nurse's utmost efforts to prevent them, or if the patient is admitted to the hospital with them, the physician's attention should at once be called to the condition as he may prefer to outline the treatment. In many instances the treatment is left to the nurse. If the skin is broken, but the surface is not very moist, after thorough cleansing with hot water and castile soap and drying with gauze sponges, aristol powder may be sprinkled over the area and a dressing of dry gauze applied; or, after the cleansing, zinc oxide or boracic acid ointment, or a paste made of castor oil and bismuth subnitrate may be applied on a dressing of gauze. These measures with the relief from pressure usually effect a cure. It is important to remember that if the blood supply can be stimulated and established, a cure can be more quickly accomplished.

Friction all about the part will help to do this and also keep the surrounding skin in good condition.

Where there is evidence of **sloughing** the part should be thoroughly cleansed twice a day with a solution of equal parts of water and peroxide of hydrogen, a medicine dropper being used to introduce it into all the cavities and well under the margin of the skin. This should be followed by an irrigation of hot (104° F.) boric acid or liquor antisepticus, and a compress wet in the same solution should be applied. Heat is stimulating, and the compresses should be changed every four hours. Or after cleansing, the surface may be sponged dry with soft gauze and a compress of hot magnesium sulphate applied. Balsam of Peru is very stimulating and this may be applied in the form of drains which can be packed well into the pockets, or applied as a dressing to the surface. Sometimes the granulating tissue grows far more rapidly than the epithelium, and these points should be burned down with caustic, — a silver nitrate stick or pencil is the most convenient to apply and handle.

Here, as in other conditions, measures which have given best results for one patient may not be as efficient for another, and the nurse should change the treatment and find what is the best for each particular patient.

Distention of the bladder and colon due to the retention of urine and feces frequently occurs, and measures which will prevent these conditions should be regarded as a very important part of the daily nursing care. Distention may be the result of paralysis, or of diminished sensation in which pain and discomfort are not produced or felt with the usual severity, and many times because the pressure of other interests so absorbs the attention that the usual discomfort is not heeded. Very serious disorders may result from the reabsorption of toxins contained in the waste which should be eliminated, and sometimes rupture of the bladder and obstruction of the intestines follow over-distention. The nurse must daily ascertain the facts as to voiding and defecation, for the word of the patient is not always to be accepted

as reliable. Regularity in elimination must be established. New habits can be formed and untidiness can many times be corrected by strictly following a definite schedule of taking the less responsible patients to the toilet, or of placing the more helpless ones upon the commode or bed pan.

Some of the measures to induce voiding and relieve distention of the bladder are: To give hot drinks, to place a bed pan partly filled with warm water under the patient, a hot fomentation over the bladder, or a large pledget of cotton which has been dipped in hot water over the pubis, so that the water drips over the parts, to pour water over the genitals while the patient is on the pan, to pour water from a pitcher or allow the water to run in the lavatory while the patient is on the bed pan or toilet, to place the patient in a warm bath, and to make gentle pressure over the bladder with the hand. A hot enema will oftentimes accomplish the double purpose of evacuating both the colon and the bladder. Inhalations of smelling salts or aromatic spirits of ammonia will sometimes help to start the flow of urine. These means should be tried again and again before resorting to **catheterization**.

When this treatment becomes necessary, the utmost precautions in procedure must be taken. Especially is this imperative when the patient is resistant or excited. Plenty of help should always be summoned to hold the patient so that a technique as nearly perfect as possible may be carried out. A rubber catheter should be used, never a glass one which is hard and breakable, for a quiet patient may act impulsively and serious injury to the bladder may result. Always explain what is to be done and admonish the patient to be as quiet and make as few movements as possible. Quickness and deftness in the use of the hands count for much in this treatment, and while talking to the patient to distract the attention, the parts should be cleansed and the catheter inserted.

As **constipation** is largely the result of insufficient water in the intestines, improper diet and lack of exercise, this

condition should be combated by having the patients drink water freely before breakfast and retiring, and between meals, supplying in so far as possible, articles of food which are laxative like vegetables and fresh fruits, stewed prunes, figs, etc., and providing opportunity for exercise preferably in the open air, but also in the gymnasium or on the ward. Massage of the abdomen will provide passively the stimulation to the colon which the more active exercises of bending, stretching and twisting the body produce.

Convulsions are not infrequent among patients who are mentally ill. They occur in the large group of organic mental disorders, in toxic conditions, in epilepsy, hysteria, and among the mentally defective.

The convulsion may be confined to a single muscle, or group of muscles, or may involve the whole body. In some cases the attack is preceded by an **aura** or warning, and the patient may cry out; he then becomes unconscious and falls to the ground. In severe cases there is a **tonic spasm** in which the whole body becomes rigid, the jaw fixed, the eyes open and staring or rolled backward, the face cyanosed and the respiratory movements cease due to the fixation of the chest. This lasts only a few seconds, and is quickly followed by the **clonic spasm** in which the action of all the muscles is quite disordered and the contractions which are involuntary and purposeless may become violent. This stage may last for a few seconds or be prolonged for several minutes. The contractions gradually become less severe and the movements finally cease, the body relaxes and without regaining consciousness the patient passes into a deep sleep, which may continue for hours. If the attack is not very severe, the patient may become conscious as soon as the movements cease, but in either case has no knowledge of what has happened.

The **management of convulsions** is mainly to prevent the patient from injury during the attack. This can best be done by not allowing a patient who is apt to have seizures of any kind to be alone or without supervision, for they fall

out of bed, fall heavily if about the ward or walking on the street, and because consciousness is so soon lost, are unable to put forth any effort to save themselves from injury. To prevent falling on sharp corners or edges, or against hard surfaces, to place a cork, padded clothes pin or mouth gag between the teeth to prevent the tongue from being bitten, to place the body in such a position that least harm can be done, to place a pillow or roll made from a blanket, a coat or some article of clothing under the head, to loosen the clothing about the neck and waist, are the most important measures. If the convulsion is very severe and prolonged for hours, a general anæsthetic (chloroform) may be necessary to control and inhibit the violent movements, but this should never be administered except by order of the physician.

After all contractions cease, the patient may be made comfortable where he fell, or placed in bed, undressed, and an ice cap applied to the head. If the tongue has been bitten, the mouth should be cleansed with some antiseptic wash.

The nurse should make the following **observations in regard to all convulsions**: Whether there is an aura and its character; where the convulsion begins, whether in the muscles about the mouth, a hand or foot; how the movements spread, how much of the body is involved and whether the contractions are slight or severe and the duration of the attack. These observations are of great importance to the physician who is rarely present when the attacks occur, for they furnish him with information which helps him to determine just where in the cortex the attack begins.

The handling of excited patients. To know what not to do is oftentimes of as much importance as what to do in the management of excited patients, and much discretion and judgment are required and must be exercised to fit the measures to the patient, for all patients cannot be treated in exactly the same way. Each one must be regarded as an individual who may have idiosyncrasies and peculiarities

which must be recognized and considered when nursing measures are applied. Some patients become more excited and even assaultive if they are touched or handled, but will yield to suggestion and persuasion, while with some others, whose reason seems blinded by fury, no amount of persuasion will make the least impression, and measures of restraint may be required to save them from exhaustion or from injuring themselves and doing harm to others. The nurse must not hesitate or show fear when in the presence of excited patients, but serenely, steadfastly face the situation. Her calm behavior and quiet speech will many times do much towards reducing the excitement, and frequently a noisy patient will become more quiet when the nurse speaks in tones which are barely audible, for the patient will imitate and not infrequently whispering tones may replace the loud talking and shouting. It is usually far better not to try to repress or limit the activity, but to direct it. The patient who restlessly rushes from one place to another, or paces back and forth unceasingly will probably push a floor polisher placed in his hands for long periods of time, and gradually becomes less talkative and active, and will promptly act upon the suggestion to rest for a while, and will sit quietly, or take up some simple hand work, or look at books or pictures. Sometimes quick music played upon the phonograph or piano will make an appeal to the patient, who will respond by marching or dancing, and gradually other records or selections which are slower and more quiet may be played, and the excitement controlled and reduced in this manner.

Whenever it becomes necessary to **forcibly carry out orders for treatments**, or to restrain the activity, it is wise to get as much help as possible and so avoid a struggle and possible injuries, for the mere presence of numbers is oftentimes all that is required to gain submission. Always explain to the patient what is about to be done and gain coöperation by persuasion if possible, but if this fails, forcibly, with as much gentleness and kindness as possible, carry out the order. Having determined upon a course of action, it

is usually better not to change or yield to the patient, except in little ways that do not matter, even though much time is consumed in carrying out the measures, because every inconsistency, vacillation or weakness will be remembered and make obedience in the future less prompt and easy. It is a common experience to hear a patient say, "When Miss Blank says a thing must be done she means it."

During an episode of excitement if it is necessary to **hold the patient**, grasp him by the forearms rather than by the hands, for the grasp may be reversed and the nurse's hands may be carried to the patient's mouth and painful wounds by biting may be inflicted. To avoid injuries from kicks provide soft slippers rather than boots, and do not stand in front of the patient, but hold him from behind and so minimize the force of the kick. A patient who has become disturbed and difficult to manage while walking about, can be approached from behind, the forearms grasped and drawn around to the back, and thus held, be made to walk backward to a room or a chair in a distant part of the ward. A patient who is restless and irritable in one group or in one part of the ward will many times become quiet if transferred to another group which may be more congenial and compatible, or given some definite task to perform, or taken on an errand. The exclusive companionship of a tactful nurse for a given period will sometimes accomplish wonderful results.

When the necessity arises to **take a cudgel or other dangerous instrument or weapon from a threatening patient**, it may be accomplished by throwing a heavy blanket over his head and for an instant enveloping him in it while he is being disarmed; or if the weapon should be a sharp one, a light mattress may be carried in front and used as a shield. It is obvious that the prevention of these situations is of the utmost importance, and upon the watchfulness and carefulness of the nurse may depend the lives of other patients and workers.

The care of suicidal patients. Every patient whose mind

is deranged must be looked upon as potentially suicidal, and the nurse must take every means and precaution to safeguard them from possible self injury and destruction. The patients must be kept under very close observation, and at no time can they safely be left alone. While eating, dressing, bathing, at toilet, awake or sleeping they must not be out of direct view. Some patients will complain of "feeling blue," of having nothing to live for, that they and their families would be better off if they were dead and so forth. Others will never by so much as a hint divulge the thoughts which continually are uppermost in their minds, but sit quietly by themselves, brooding and scheming how to carry out their plans, and when least expected, make the attempt to do injury to themselves. The nurse must, therefore, not only carefully observe the mood, but find out the content of thought and so anticipate and prevent serious accidents. There are other groups of patients who do not contemplate self destruction, but when a sudden, uncontrollable impulse overwhelms reason and judgment, will do acts which not only endanger life, but may result in death. These acts are often the responses to hallucinations and delusions. The nurse's vigilance is never to be relaxed for one moment throughout the day or night until the physician directly prescribes more freedom and privileges for the patient. Even then, she must be alert and watchful for tendencies which may have been dormant or cleverly masked and may suddenly become active when least expected.

CHAPTER VIII

DANGERS AND PRECAUTIONS — ACCIDENTS AND EMERGENCIES

Some of the more common dangers to be guarded against are the **picking up** of pieces of glass, tin, tacks, nails and sharp instruments and **secreting** them for future use; the **breaking** of windows, dishes, picture glass and mirrors to obtain glass with which to cut the throat or wrist; **swallowing** safety pins, glass, nails, hair-pins, rags, spoons, the metal tops of salt shakers and other articles; **eating** matches, soap and soap powder, **drinking** ink, floor polish, paint, kerosene, gasoline or anything which can be found; **strangulation** by means of rope, belt, bath robe cord, stocking, towel, necktie or strips of sheet, blanket or clothing which have been twisted and braided into a rope or cord; **asphyxiation** by inhaling illuminating gas or by drowning in the bath tub; **escape** by opening doors and windows by means of bent wire or hair-pins, and with keys which have been stolen from nurses and attendants; **leaping** out of windows or down stairways, in front of automobiles, teams, trolley cars, and into river, lake or stream if conveniently located.

Poisonous drugs should never be kept in a room or on a ward where there are irresponsible patients, unless carefully guarded by lock and key. The best plan is to have the medicine chest in a room into which the patients are never permitted to go, and even there it should always be locked. **Antiseptic solutions** must not be allowed to stand unprotected for even a very short period. When surgical dressings are being made and solutions and instruments used, constant watchfulness must be exercised and maintained.

Accidents and emergencies. The nurse must at all times

be prepared to meet emergencies, for among the mentally ill many forms of accidents occur primarily because of the disordered condition of the mind. She must not, even when facing a serious accident, allow herself to become excited, but must keep her poise and presence of mind, give no alarm to other patients, and by her calm manner reassure them as well as the patient to whom the accident has befallen. She must act quickly, using her best judgment as to the measures to be applied to relieve the immediate danger, summon the physician and make ready those things which he will need on arrival. If the patient's condition is serious, the nurse must remain constantly with him and direct others to run the necessary errands and make the needful preparations. The prompt application of simple emergency measures will many times save the life of the patient.

Choking. Remove the obstruction by opening the mouth and hooking it out with the forefinger. If it is in the larynx, and coughing would indicate this position, give a sharp blow with the open hand between the shoulders; or if it is in the esophagus, give a drink of water, a piece of bread or some soft food to swallow. If these measures fail, use the pulmotor if it is available. To prevent the patient swallowing some object or article already placed in the mouth, bend the head forward on to the chest and hold it in that position until help arrives, when the mouth can be opened and the object removed. If glass, pins or other sharp objects have been swallowed, bread and other solid food should be given so that they may be imbedded and carried along with less damage to the mucous membrane of the intestines. Cathartics must not be given except by direct order of the physician.

Asphyxia or suffocation is a condition where consciousness is partially or completely lost because of defective oxidation of the blood, and carbon dioxide in excess poisons the body. This may be due to a foreign body in the larynx, or water as in drowning, or compression of the throat as in hanging, and to inhalations of illuminating gas. Loosen all clothing about the neck and waist, provide fresh air, examine the

pharynx for obstruction, give artificial respiration and inhalations of oxygen.

Strangulation. Remove whatever is about the neck; if the body is suspended, first cut it down, taking care that it does not fall; loosen the clothing, open the windows, remove any foreign bodies (false teeth) from the mouth, pull the tongue forward and give artificial respiration.

Wounds. If the trachea has been cut the breathing will be difficult and the blood which is about the wound and comes from it will contain air bubbles. To prevent the blood from flowing into the trachea, turn the patient on the side or on the face and check the bleeding by pressure. Have ready the tracheotomy set for the physician when he arrives, and make other preparations for whatever surgical measures may be required.

If a large artery in the neck is injured, bend the head forward on to the chest and make direct pressure on the vessel with thumb and fingers. If a large vein has been cut, pressure above and below the injury will help to control the flow of blood and prevent air from entering the proximal end. If the radial artery has been injured, place a tourniquet above the elbow, elevate the arm above the head and make pressure above the injury; or a pad may be placed in the hollow of the elbow, the arm forcibly flexed and pressure made on the vessel. Thirst usually accompanies hemorrhage, and water in small quantities should be given often if the patient can swallow; if not, saline solution per rectum should be given.

Clothing on fire. Prevent the patient from running as this fans the flame and makes it spread more rapidly. If it cannot be extinguished quickly place her on the floor and roll in blankets or a rug. Protect the head with a wet towel so that the flames will not be inhaled. In all cases of burns there is always more or less shock. This is indicated by weak, rapid heart action, cold skin, pallor, feeble or sighing respiration and sometimes by nausea. This condition should be treated immediately by placing the patient in bed

with the head lowered (the foot of the bed may be elevated on a chair), cover with warm blankets and apply heat. Do not attempt to remove the clothes or apply dressings until the pulse becomes stronger, or definite orders have been received from the physician.

Burns may be of two kinds, physical or chemical. **Burns and scalds** caused by fire, hot water or steam should be treated by applying a saturated solution of sodium bicarbonate or vaseline and dressings to exclude the air. If blisters have been raised, these should be drained and the burned skin cut away to prevent sloughing, and a dressing of boracic acid ointment or Carron oil (equal parts of linseed oil and lime water) applied. Burns produced by acids should be treated with a solution of sodium bicarbonate or some other alkali; if caused by strong alkali, lemon juice or vinegar should be applied; burns produced by phenol should be treated by the application of alcohol. All dressings should be securely put on so that they cannot be removed. Delirium frequently develops after severe burns, and injuries must be guarded against.

Drowning. If the patient is breathing when rescued, place him at once in bed, cover him with warm blankets, apply heat and friction to the body, or place him at once in a hot bath which will furnish the stimulation. If the respiration has ceased, place the body face downward, a folded blanket or garment under the chest, so that the shoulders and head are lowered and that the water may drain from the lungs; wrap the body in blankets and apply heat; gauze or a handkerchief may be moistened with aromatic spirits of ammonia and held to the nostrils; clear the mucus from the mouth, and briskly rub the upper part of the body. If breathing does not begin at once, give artificial respiration and continue to do so for a long time.

Fractures. The signs of fracture are pain and tenderness about the point of injury, inability of the patient to move the part, deformity which may be seen or felt, crepitus, swelling and discoloration. The first thing to be done is

to place the patient in as comfortable position as possible; then remove the clothing, ripping the seams if necessary, beginning on the side opposite the injury. Move the limb no more than is absolutely necessary, as the jagged ends of bones may lacerate the tissues, or perforate a blood vessel. If the limb must be moved slip both hands underneath and grasp the bone at two points a little distance from the fracture on both sides, making extension on the distal side so that the ends will not rub together. Place in the position desired and support if necessary with pillows or pads. If the fracture is compound an antiseptic dressing should be temporarily applied. Get together splints, bandages, adhesive plaster and whatever else the physician will need when he arrives. In fracture of the skull there is very little a nurse can do except to keep the patient as quiet as possible, apply cold compresses to the head, be on the lookout for hemorrhage from the ears and nose, and guard against injury should convulsions occur.

Dislocations are very painful and produce many of the symptoms of fracture. The nursing procedures are to remove the clothing, support the joint if it is more comfortable and apply cold compresses. If the dislocation is only partial, some simple manipulations, the performance of some of the ordinary movements of the particular joint, will reduce it.

Poisons are sometimes taken by mistake or accident and sometimes with deliberate intent for the purpose of self destruction. Most of the poisonous drugs produce symptoms so sudden and severe that the nurse's attention would be attracted, even though the patient might not make any complaint and stubbornly declare he had taken nothing to cause them, and upon the correct interpretation of these symptoms and the prompt application of first aid measures the life of the patient may depend. When the symptoms and the circumstances indicate that a poison has been taken the nurse should at once send someone to call a physician, and set about to find out what drug and how much of it has been taken. No time should be wasted in searching

for the drug or in ineffectual efforts to have the patient tell what has been taken, for most poisons are very quick in action and the time so lost would count heavily against the chances for recovery. Many of the irritating and corrosive drugs produce visible injury to the mucous membrane of the mouth and throat. Other drugs may be detected by stains and the odor of the breath, and others produce symptoms so definite and characteristic as to enable the nurse to know what has been taken. While waiting for the physician she should prepare and give the **chemical antidote** if it is known and at hand, or should send for it if it is not. This should be given either alone or in conjunction with an evacuant, and in such quantity as to thoroughly neutralize the poison. If the chemical antidote is not known or is not at hand, measures to produce emesis should at once be taken, provided the injury to the esophagus and stomach is not too great, for vomiting tends to increase the damage already done. If the patient is unconscious or for any reason unable to swallow, the stomach must be washed, but again lavage is contra-indicated when the injury to the esophagus and stomach has been severe, for the tube might perforate their walls.

The simplest **emetic** is a glass of warm water to which two teaspoons of salt have been added. Mustard water made by adding 2 to 4 teaspoons of fresh mustard to a glass of warm water is also good. This however should not be given when there is indication of irritation of the stomach. Apomorphine is the only emetic which can be given hypodermically and the dose is $\frac{1}{16}$ grain.

A **cathartic** is prescribed by the physician to follow the chemical antidote to promote intestinal evacuation and to remove the compounds formed by the antidote. Castor oil is largely used as it forms a protective coating to the mucous membrane and so retards absorption. Magnesium sulphate in doses ranging from one half to four ounces in water is also employed. Croton oil has a very rapid action and one to four minims is sometimes given.

The **corrosive and irritating drugs** produce the most fatal forms of poisoning, for these tend to corrode and destroy the tissues with which they come in contact. Irritant drugs when taken in large quantity or in concentrated form become corrosive. The **mineral acids**, nitric, sulphuric and hydrochloric, have a very corrosive action and produce a whitening or discoloration of the mucous membranes and deep burns on the lips and about the mouth. Intense burning pains from the mouth to the stomach, nausea, vomiting and diarrhoea are among the early symptoms, and collapse with cold extremities, moist, clammy skin, pallor, small, feeble pulse and rapid respirations follow quickly. Some alkaline solution, lime water or milk of magnesia, to neutralize the acid should be given if the patient can swallow. If the injury is not too great, the stomach should be washed with a weak alkaline solution. This is usually followed by demulcent drinks which tend to soothe and protect the parts to which they are applied. Barley water, flaxseed tea, gruels, milk and white of egg are most commonly given. Heat should be applied externally and stimulants are ordered by the physician to sustain the heart action and relieve the depression.

Oxalic acid does not produce whitening of the mucous membrane, but the symptoms resemble other forms of acid poisoning. There are in addition great muscular weakness, twitchings and sometimes convulsions. Lime water is very efficacious when it is given early.

The action of **strong alkalis** is also irritating and corrosive, and the symptoms are much like those produced by acids. Ammonia, washing soda, lime, caustic potash and lye are among the alkalis most commonly used. An acid like lemon juice or vinegar should be promptly given, or the stomach should be washed with a weak acid solution. One or two teaspoons of vinegar to a glass of warm water is usually most convenient. The further treatment is the same as in acid poisoning.

Bichloride of mercury, corrosive sublimate, is also caustic

in its action, and the symptoms appear in a very short time after the drug has been taken. The mucous membrane of the mouth will look glazed and sometimes white, and vomiting, purging, severe abdominal pains and later collapse and coma follow. The white of egg should be promptly given, one white to about four grains of the drug, and milk may be freely given. Vomiting should be induced after the antidote has been administered and kept up until the stomach has been emptied, or the stomach tube may be used to evacuate the gastric contents.

Arsenic poisoning may result from eating Paris green, fly poison, and "Rough on Rats." Arsenic is an irritant and the symptoms are those of an acute enteritis, nausea, vomiting, and purging with blood in the stools. If vomiting has not already been produced by the drug, it should be induced at once. The antidote, hydrated sesquioxide of iron, should be obtained immediately from the pharmacy, if not already at hand. Demulcents should also be prepared and made ready to administer. Castor oil is usually given to hasten elimination of the drug and compounds. The urine must be carefully watched, for suppression may occur.

Phosphorus, an irritant in action, is taken in the form of rat poison and matches. It may sometimes be detected by an odor of garlic to the breath. Pain and burning in the stomach, burning sensation in the throat, great thirst, nausea and vomiting are the early symptoms. The prostration is very great, the pulse is weak and rapid, the skin is cold and there may be a noisy delirium or the mind may remain clear and the patient passes into coma. Copper sulphate in weak solution is the best emetic to use, or the stomach may be washed with a solution of potassium permanganate. This solution should be claret color and the precaution should be taken that no undissolved crystals are introduced into the stomach. Mucilaginous and albuminous drinks are given. All oils and fats must be strictly avoided in medicines and nourishment as they aid in the absorption of the drug.

If **iodine** has been taken, give at once large quantities of a starch solution made by mixing one part of starch to about fifteen parts of water. The stomach should then be emptied by emesis or lavage and demulcents given. Heat should be applied externally, and such further measures as are prescribed carried out.

Poisoning by **silver nitrate and its preparations argyrol, protargol and indelible ink** should be treated by sodium chloride (salt), for this forms an insoluble chloride and also acts as an emetic. Two teaspoons of salt to a glass of water would make a solution of desired strength.

Phenol (carbolic acid), creosote, creolin, lysol, thymol and salol produce similar toxic symptoms. Phenol is highly caustic and produces white scars on the lips and in the mouth, and the mucous membrane becomes hard. The odor can usually be detected on the breath. The symptoms are much the same as in other forms of corrosive poisoning, and in addition, the lips, ears and eyelids are of a leaden or bluish color. Alcohol of 50 per cent. strength, or whiskey, should be given at once and the external burns treated with pure alcohol. The solution for lavage should be made of one or two parts of alcohol to four parts of water. Care must be taken not to use oils or fats in any form during the later treatment.

Toxic symptoms may be obtained from large doses of the **coal tar derivatives**, acetanilid, phenacetin and antipyrin, which are contained in various **headache and anodyne mixtures**. The symptoms are: Blueness of the skin and lips, difficult breathing, rapid feeble heart action and collapse. The treatment should be to promptly evacuate the stomach, give inhalations of oxygen, artificial respirations and heart stimulants.

In poisoning by **alcohol** the first step is to evacuate the stomach, and apomorphine, gr. $\frac{1}{10}$, is frequently given hypodermically. Apply cold to the head, heat to the extremities, and give inhalations of ammonia. Artificial respirations may be necessary and cardiac and respiratory stimulants will be prescribed by the physician.

Chloroform and ether when taken by mouth enter the circulation extremely rapidly and the patient is soon in a stuporous condition. The skin is cold and covered with perspiration, the pulse is slow and weak, the respirations may be loud at first but become shallow, irregular and infrequent. Immediately produce emesis or wash the stomach, keep the head low, provide fresh air, give artificial respirations and apply external heat.

Poisoning from the **hypnotic drugs**, chloral, paraldehyde, trional, sulphonal and veronal, may also occur. As these are allied to the alcohol group the symptoms and treatment are similar.

Opium, morphine, laudanum and paregoric when taken in toxic doses produce drowsiness and stupor from which the patient may be aroused with difficulty; and he quickly relapses. Other symptoms are contracted, "pin-point" pupils, insensibility to pain, very slow respirations, sometimes only six or eight to the minute, slow heart action, moist skin and dry mouth. Wash the stomach with a solution of potassium permanganate, and give hot, strong coffee by mouth and by rectum; empty the bladder by catheterization for reabsorption of the drug may occur; apply heat to the extremities and alternate hot and cold applications to the head and chest; give artificial respirations and make every effort to stimulate respirations as this centre is greatly depressed. Keep the patient awake if possible, but too much walking or physical exertion should be avoided as the general depression is severe. Caffeine is sometimes given hypodermically.

Nux vomica and its alkaloid **strychnine** produce toxic symptoms of muscular twitchings, cramps and irregular muscular movements which may progress to convulsions. These may come on at the slightest sound, touch, jar or flash of light. There is usually much cyanosis of the face due to the fixation of the respiratory muscles. Wash the stomach with potassium permanganate solution, and provide absolute quiet for the patient and keep him in a dark room. **Inhala-**

tions of chloroform may be necessary to control the convulsions when they are very severe.

Belladonna, atropine, hyoscine and scopolamine in toxic doses produce similar symptoms. The patient is wide awake, active and restless, the mouth and throat are very dry, the tongue is red, the skin is hot and flushed, the eyes are very bright, the pupils are widely dilated and do not react to light, the pulse is weak and rapid, the respirations are much increased in rate and there may be a busy, talkative delirium. "As wild as a hare, as red as a beet, as dry as a bone," is a very old description of belladonna poisoning. Wash the stomach at once with potassium permanganate solution, apply heat to the extremities, and hot and cold alternately to the head, and give artificial respirations.

To summarize. In case of poisoning first get rid of the poison by an emetic or lavage; or knowing the drug which has been taken give the antidote if it is available. The emetic should be wisely chosen and administered with care, for vomiting may increase an injury to the stomach which is already severe. Less damage is usually inflicted by using the stomach tube. When possible the fluid used for lavage should contain the antidote. Having gotten rid of the poison and administered the antidote the physical symptoms should be treated. The cathartic and cardiac and respiratory stimulants are prescribed by the physician, but in an emergency the nurse should give those which she knows would be prescribed.

CHAPTER IX

NURSING IN THE ORGANIC PSYCHOSES

SENILE PSYCHOSIS

Senile psychosis is a form of mental disease occurring late in life, characterized by a gradual, progressive mental weakness, manifested especially by failure of memory, forgetfulness and inability to recall recent happenings.

Physical symptoms. There are no outstanding physical symptoms peculiar to senile mental disorder, but are the obvious signs of old age, — an old-looking and usually wrinkled skin due to loss of fat, muscular weakness and tremors, loss of appetite, headache, dizziness, insomnia, dull looking eyes sometimes with clouding of the cornea and sometimes with cataract, and varying degrees of deafness.

Mental symptoms. Sensation is usually dulled, and perception faulty, for these patients do not understand clearly, often misidentify persons and may be disoriented as to time and place. The memory defect is usually marked, for while remote events can still be recalled accurately, the power to retain and recall recent happenings is greatly diminished and impaired. The tendency to reminisce and to live much in the past is strong. Fabrication is quite common and the gaps in memory are readily filled with imagined events. Attention is interfered with and is fixed with difficulty. The ideas tend to become more and more limited and the same ones recur over and over (**perseveration**). Illusions and hallucinations may be present; and delusions are quite common, some of the more common ones being that the clothing and personal property have been stolen, that they are very badly treated, cruelly abused,

poisoned, etc. The patients are self centered and are interested principally in what concerns themselves. They may be dissatisfied, irritable, distrustful, suspicious, anxious, depressed, unsympathetic and indifferent, and the mood may change frequently and without apparent cause. In conduct they may be orderly and quiet, coöperate well with the nurses and give very little trouble, or they may be untidy, meddlesome and restless. The restlessness often becomes more marked at night, and they seem to be continually getting in and out of bed and wandering about the ward whenever supervision is relaxed. They hoard all kinds of worthless objects and articles and secrete as many as possible on their persons. Sometimes they are quarrelsome, threatening, abusive, profane and obscene, easily excited, and become resistive when they think they are being dictated to or managed, especially by those who are younger than they.

Nursing procedures. Inasmuch as insomnia is a prominent symptom, special attention should be given to the diet, for in the aged food bears a close relation to sleep.¹ Hot milk or some hot liquid food at bedtime will often overcome restlessness and sleeplessness; and a small quantity of hot milk given in the early morning when the patient wakes will frequently insure sleep again. The diet should consist of easily digested foods and milk in abundance if it is well digested. Soft foods must be provided when the teeth have been lost or are defective. The mouth and teeth must be carefully cleansed at least twice daily, using a tooth brush or swab and some antiseptic wash. Sufficient clothing of suitable texture must be provided, and care exercised that these patients are properly dressed, for many forget to put on all the necessary articles when dressing and will fail to take them off when going to bed.

The bowels and bladder must be watched, for sensation being dulled, they often become distended without apparent discomfort. Regularity of elimination should be established, and thereby not only benefit the patient, but save much time

¹ Friedenwald and Rührhah, "Dietetics, Food for the Aged."

and unnecessary labor for the nurses. Regular bathing in tub or shower is necessary to keep the skin in good condition. If the patient is helpless, bed baths must be given with the same regularity. Bathing is often a source of much friction, for many old people do not enjoy it and become quite impatient and irritable and sometimes difficult to manage. It is a good plan to take away, at this time, all the trash and worthless objects which the patient has been hoarding. If the patient is confined to the bed special care must be given to the back and other prominent points to prevent pressure sores. Frequent bathing with soap and water to insure cleanliness, followed by brisk rubbing with alcohol to dry the skin and zinc oxide ointment well rubbed in, will do much to prevent bed sores, even in cases of incontinence. The bones are fragile, and fractures occur easily, and much care must be exercised in lifting and moving the patient to avoid injury. Enclosing the bed by boards placed at the sides will prevent a restless patient from falling. Bruises are easily acquired and persist for a very long time, and the prompt application of cold will frequently prevent marked discoloration.

In the nursing of the mental symptoms little can be accomplished. Make and keep the patient as comfortable and contented as possible, avoiding all sources of irritation. Control them by letting them think they are having their own way. The most stubborn and resistive patients can be managed by a nurse who is sympathetic and uses tactful methods. It is best not to agree with the delusions, for this tends to confirm them, and one can be truthful about the illusions and hallucinations and say "I do not see it" or "I do not hear it," etc. The assurance, repeated over and over, that the nurse is looking after the patients and that so far as she can prevent it no harm or annoyance shall come to them, brings relief and satisfaction for a while, at least. Nothing is gained by argument, except to make them irritable and unhappy, for many of their delusions are fixed and cannot be changed.

Occupations, exercise and diversions. Old people as a rule do not like new forms of work and will not show any interest in them, but rather a distaste for them. As they live much in the past, whatever is associated with their lives at earlier periods will be more likely to arouse interest. Knitting a wash cloth or a bag in which to carry their own belongings, crocheting or knitting a bit of lace for some garment, sewing an apron or kitchen holder, patchwork squares and darning are some of the ways in which the women may be occupied. They enjoy scrap-books and will help to make them occasionally. They do not like to be too much directed in their work, and will oftentimes show a good deal of resentment and become quite irritable, so it is better to allow them to do the work as they have formerly done it and so keep them contented as well as busy.

It is more difficult to employ **the old men**, for the normal man when in the house likes to lounge about, to read and smoke, and there seems to be little in the activity of the household to appeal to them. They usually are more interested and do better work if they can go out to find some occupation, as if going to business. Reading the newspapers and magazines, whittling to make garden sticks, simple toys and bird houses from small wooden boxes, tying knots, chair caning and light carpentry are some of the ways in which they may be employed. Calendars on which the weather can be recorded from day to day in colors are easily made and are a continual source of interest. Cardboard 8×10 inches can be clocked into spaces and numbered for each day of the month. When the day is pleasant and the sun shines a yellow disk is pasted on; when cloudy a gray disk is used and when stormy a black disk makes the record. When the weather in a single day is variable a small portion of each color may be used to make the record accurate to weather devotees, of whom there are usually many among the aged; the observation and correct record required by this simple means affords much pleasure.

Music is enjoyed by all; and **reading aloud** will afford

much pleasure to some, especially if it be from books associated with early years. Day after day for a period extending over many months a patient took the greatest pleasure in reading to his family an account of the "Eruption of Vesuvius" contained in an old reading book which had been a part of his education in boyhood.

Games of cards, dominoes, chess, checkers, backgammon and puzzle pictures are suggested for diversion. Little parties with light refreshments and music, an occasional moving picture exhibition and vaudeville are further sources of entertainment.

Inasmuch as these patients are very easily fatigued the exercise should be limited both in amount and duration. Sitting in the open air, driving and walking for short distances may be the limit for some, while a moderate amount of light work in the house or garden may be beneficial to others. Too much must not be expected of them, for they want to be warm and comfortable, to sit quietly and to doze, and not to be too much interfered with or disturbed.

PSYCHOSIS WITH ARTERIOSCLEROSIS

This is a chronic, progressive and incurable mental disease due to changes in the structure of the cerebral blood vessels.

Physical symptoms. The patient usually complains of dizziness and headache and may have fainting attacks. The superficial arteries feel rigid like "pipe stems" when rolled under the fingers. The pulse is hard and of high tension, due to the blood pressure which is, in these cases, always much above the normal. As rupture of the diseased vessel is always imminent, symptoms of cerebral hemorrhage must be watched for. These are described in a later paragraph.

Mental symptoms. Defects of memory are quite noticeable and are shown by inability to recall recent events, and aphasia, which may be either sensory or motor, for these

patients frequently are unable to speak names and words and fail to recognize objects or know their uses. The attention is fixed with difficulty and they seem unable to think accurately and quickly. Delusions of a persecutory nature may be present, and emotional disturbances are shown by alternate laughing and weeping, anxiety and depression.

Nursing procedures. These patients must be kept quiet, avoiding worry, excitement or any exertion which would tend to raise the blood pressure, and so they are usually cared for in bed. They appreciate, often keenly, their inability to think quickly and correctly and worry about it. They say "I can't think" or "I can't say it" and feel quite distressed about it. A tactful nurse can do much towards relieving this situation. Other nursing procedures are much the same as in the senile mental disorder.

Symptoms of cerebral hemorrhage. There may be temporary loss of consciousness from which the patient soon recovers, and there may be paralysis of a group of muscles as shown by inability to move an arm or a leg; or the condition may be more severe and the patient remains unconscious. The face is congested; the breathing is slow and stertorous, and on expiration one cheek may be puffed out; the pulse is slow and may be soft; the temperature may be subnormal; and urine and feces may have been voided involuntarily. There may be a difference in the appearance of the two sides of the face, and an arm or a leg may when lifted show a difference in resistance. The patient may die or may recover consciousness after a more or less prolonged period, and be unable to move an arm or a leg or both on the same side of the body. If the muscles of the right side are involved, aphasia and speech defects are to be watched for. The paralysis may involve different parts of the body, as for example, there may be monoplegia a paralysis of one limb or of a certain group of muscles hemiplegia, paralysis of one half the body; and paraplegia, paralysis of the lower half of the body.

Nursing procedures. Loosen or remove any tightness about the neck and waist; place the body in a semi-recumbent position; apply cold compresses or an ice bag to the head and dry heat to the extremities. If the breathing becomes difficult, turn the patient on the side, or move the head forward or backward or hold the jaw forward, and keep the mucus from collecting in the throat. The **mouth** will require special attention if the patient remains long unconscious. Care must be exercised to have the swab not too wet or dripping as this fluid with the secretions of the mouth, if aspirated, would in all likelihood cause a pneumonia. If the mouth is open, the tongue and lips become very dry and should be moistened frequently with equal parts of glycerine and water.

The **eyes** also require special care, for they are usually partly open when a patient is unconscious, and as the winking reflex is abolished the exposed part becomes dry, and an inflammation of the conjunctiva is very apt to follow. If the secretions have dried and hardened on the lids, they should be removed with a bit of cotton wet in salt solution. The thickened secretion can be removed from the conjunctival sac by irrigating with sterile salt solution. A little white vaseline applied to the lids will prevent gumming, and sterile saline solution dropped into the eyes several times a day will help to prevent drying. The eyes may be kept moist by placing a piece of very thin rubber tissue over them, and securing the edges to the skin by a little vaseline.

GENERAL PARALYSIS

General paralysis, known also as dementia paralytica, paresis, and to the laity as "softening of the brain," is a syphilitic disease of the brain which usually begins in adult or middle life and progresses steadily with increasing mental and physical weakness, and leads ultimately to dementia and paralysis.

Physical symptoms. One of the most noticeable symptoms is the speech defect, a difficulty in articulation which is

easily demonstrated when the patient attempts to enunciate words like "truly rural," "Methodist Episcopal," and "third riding artillery brigade." This defect is due to muscular incoördination involving the finer speech movements. Other symptoms are: Tremors of the muscles of the lips, the tongue and hands; uncertain, tottering gait; general muscular weakness which may progress to paralysis and utter helplessness, with incontinence of urine and feces; difficulty in swallowing, sometimes choking when only liquid food is taken. Convulsions usually appear at some period of the disease. The physician finds many reflex changes, the knee jerk is lost and other tendon reflexes may be abolished or exaggerated, and the pupils, which may be irregular or unequal, do not react to light.

Mental symptoms. This disease is rather insidious in its onset and the earliest symptoms are frequently overlooked or attributed to other causes or conditions. Among the symptoms which are first noted are slight changes in disposition and defects of judgment. These patients show gradually more marked alterations in character and habits, often are boastful of their power and influence, discuss their intimate private and business affairs with comparative strangers as well as friends, associate with persons of questionable character, and in both conversation and conduct show a loss of the finer feelings, bring discomfort and shame to their family and friends, and may become so lacking in judgment that impracticable schemes and unwise business ventures are entered into and unprofitable investments and extravagant purchases are made which threaten financial disaster. In the beginning they may be merely forgetful, but the memory disorder becomes more marked as the disease progresses. Fabrication is prominent and lapses are filled in with most fantastic experiences. They may misidentify persons and fail to recognize their surroundings, and gradually become more and more inattentive to what is transpiring around them. In thought the same ideas recur again and again; reasoning becomes impaired and

they will give quick and erroneous answers without any reflection, replying promptly "eight times eight is eighty eight" and show not the least concern. The reckoning of time relations is also difficult for they will say "I was born in 1870, married in 1900 when I was eighteen years old," etc. Delusions become prominent and dominate the conduct. In the beginning they are usually of the expansive type, extravagant and absurd; or they may be of the depressed type characterized mainly by ideas of persecution. Emotional disorders are among the early symptoms, and depending on the delusions the mood is exalted or depressed; but these gradually give way to feelings of indifference and apathy and dementia follow. In some forms there may be frequent episodes of excitement or the patient may be melancholic and stuporous. All symptoms may abate and remissions occur for a time.

Nursing procedures. When these patients require the services of a nurse, or are admitted to hospital, they usually have no appreciation of their weakness or deficiency, for they are neglectful of dress, fail to properly button their clothes, and are careless in their habits; they will crowd the food into the mouth almost to the point of suffocation and spill much on their clothes. All food should be carefully prepared, made soft or cut fine and served in limited quantities. In the later stages they must be spoon fed, for they choke so easily, and will try to swallow the spoon and other articles not meant for food. They do not feel pain, and are easily burned, and no hot food should be given. The bladder and bowels may be greatly distended and give no discomfort. The bones are peculiarly brittle and break easily, so these patients should not be permitted to stagger about the ward unassisted. In excitement they often injure themselves, pulling the tongue, scratching the face and pulling the hair, and to relieve this condition the physician usually prescribes a warm bath or pack. When bedridden, the skin having little resistance breaks down easily, and the usual nursing measures will do much to prevent bed sores, but occasionally

in spite of the most conscientious care they may occur. The convulsions are managed in the usual manner.

Occupations. In the earlier stages some simple forms of occupation may be given, but as a rule these patients are so inattentive and have so little power of concentration, that much in the way of results cannot be expected. Music and simple quiet games may be employed. Many patients will pass the better part of the day writing checks and planning the most gigantic schemes to acquire or spend their wealth. Because of muscular weakness and unsteady gait little besides motoring and driving can be attempted out-of doors.

Juvenile paresis is a congenital form of the disease, and the symptoms may appear as early as the eighth year. The nursing measures follow the same lines as in the adult form.

Cerebral syphilis is a disease in which the symptoms may be similar to those of general paralysis, but do not progress so rapidly, and the personality is, as a rule, better preserved. The nursing procedures are those to meet the needs of the symptoms.

Tabes dorsalis, commonly called **locomotor ataxia**, is a syphilitic disease of the spinal cord, in which there is a chronic inflammation of the membranes and degeneration of the posterior roots and columns, the fibres of which convey sensation and impressions of muscle sense. Many physical symptoms are produced and mental symptoms also may occur.

Among the earliest **symptoms** are sharp, darting pains, "lightning-like pains," which start in the ankle and instep and shoot up the leg to the thigh; then gradually the ataxia begins, inability to walk in the dark, or to move the legs unless each movement is watched and directed by sight. The patient may be able to stand erect, but upon closing the eyes while so standing, will sway and fall, because equilibrium can no longer be controlled through the muscle sense. This is known as **Romberg's sign**, and is an important symptom of this condition. There may be gastric pains and disturbances and sudden attacks of vomiting. Urinary

and bladder disturbances may also be present. The pupils do not react to light and there are other reflex changes. Mentally the patient may be disordered, have hallucinations and delusions, be depressed and gradually deteriorate.

Nursing procedures. This is a disease of slow progress and prolonged course, and remissions may occur which always bring great hope to the patient and the family. For a long time the patient may be able to get about with the help of a cane and later with crutches, but gradually he becomes unable to stand and finally is helpless and must be cared for in bed. The usual measures of care and observation must be given as the symptoms make them evident.

The **diagnosis** of the preceding syphilitic diseases of the central nervous system has been much simplified by the Wassermann blood test and the analysis of the spinal fluid. **The Wassermann reaction**, or test, is a complex biological reaction which depends on the fact that the blood of men and animals acquires the power to destroy certain substances, bacteria, etc., when these are present in the body for some time or when they are introduced into it repeatedly in small quantities. This test confirms the diagnosis when the symptoms point to syphilis, and helps to make positive the diagnosis in doubtful cases. To carry out this test the following substances are required: The blood serum of the patient which has been heated and cooled, the blood serum from a normal guinea pig, a watery extract of syphilitic tissue which contains the microorganisms in large numbers, a definite number of red blood corpuscles from a normal sheep and the blood serum from a rabbit into whose body red blood corpuscles from a sheep have been injected at repeated intervals, which has been heated and later cooled. The various substances are placed in a test tube in definite quantities and order and the mixture is placed in an incubator for definite periods. When a patient has had syphilis and there are substances in his blood which tend to destroy the syphilitic organism, *treponema pallidum*, no change takes place in the opaque appearance of this red mixture of blood

serum, corpuscles, etc. This is said to be a strongly positive reaction, or in the terms of the laboratory it is "four plus," and indicates that the disease is not cured. If, however, the patient never has had syphilis, the mixture loses its opaque appearance and becomes clear, and the reaction is said to be negative. When the change is slight, or when the mixture becomes only partly clear, or almost clear with only slight cloudiness, it is said to be three plus, two plus or one plus.

This test is also made with the spinal fluid, for in tabes dorsalis and the cerebral forms of syphilis the spinal fluid often gives a positive reaction when the blood does not.

The microscopic examination of the spinal fluid usually shows an increase in the number of white blood corpuscles.

The blood for the Wassermann test is obtained from the veins of the arm. The skin is thoroughly cleansed with soap and water and dried with alcohol. It is further prepared by the application of tincture of iodine. Other preparations are to boil the syringe and needles, have ready a sterile test tube to receive the blood, a tourniquet to apply to the arm and a sterile dressing to apply when the needle is withdrawn.

The spinal fluid is obtained by **lumbar puncture**. If the patient remains in bed, the body must be brought to the edge and the knees and chest brought as nearly together as possible, so that the greatest curvature of the back may be obtained, as this tends to enlarge the intervertebral spaces through which the needle must be inserted. Some physicians prefer to have the patient seated in a chair. The trunk is bent forward so that the chest rests upon the knees which may be elevated by means of a foot rest. After the skin has been thoroughly cleansed and dried, iodine is applied. Other preparations are to boil the needle which should be of platinum as it does not break, and have ready a sterile test tube to receive the fluid and a sterile dressing to be applied when the needle is withdrawn. If local anæsthesia is to be administered, this also should be at hand.

Following lumbar puncture the patient is kept in bed and

given liquid diet for about twenty-four hours. Nausea and vomiting sometimes follow this procedure. A sudden chill may also occur, and hot-water bags and extra blankets should be applied, and a hot drink may be given.

Mercury has long been employed in the treatment of syphilis and is administered in various ways, — by mouth, by injection and by inunction. It is injected into the gluteal muscles at intervals of two or three days. Headache may follow the injection and usually there is some discoloration of the tissues about the point of injection. When given by inunction, in the form of ointment, it may be applied to the axillæ, groins, back, abdomen and chest. Before beginning the treatment the patient is given a full cleansing bath; and usually he receives a bath but once a week thereafter while this treatment is continued. A different location is chosen on successive days, and it is best to be systematic in this. The skin of the site chosen is then prepared by thoroughly washing with soap and hot water and drying. Ointment about the size of a small nut is rubbed into the skin for about fifteen minutes. On the sixth day the treatment may be omitted and a full bath for cleansing given, and the treatments are resumed. The nurse should wear rubber gloves when applying the ointment, for some individuals are especially susceptible to the drug and sufficient absorption may take place to produce toxic symptoms. Whenever a patient is receiving mercurial treatment, the nurse must be watchful for the symptoms of overdosing. Among the first to appear are tenderness of the teeth on pressure, then the gums become sore, saliva is much increased, there is a metallic taste in the mouth and small ulcers may appear on the lips, tongue or gums. During the period of treatment by mercury special care must be given the mouth and teeth and some astringent mouth wash provided to retard and prevent salivation.

Arsphenamine, formerly known as salvarsan, an arsenic preparation, has been used successfully during the past few years in the treatment of active syphilis, and is also given in

the cerebral forms. It is in the form of a yellow powder which is kept in a sealed tube for the reason that it so readily changes its composition and becomes unfit for use if it is exposed longer than is absolutely necessary for preparation and administration. The powder is dissolved in a certain quantity of saline solution, made neutral by the addition of sodium hydroxide, and injected intravenously. For the treatment of the cerebral forms, one hour after the solution has entered the circulation a definite amount of blood is withdrawn. This is kept absolutely sterile, placed on ice and allowed to clot. The next day the serum is diluted, heated and injected into the spinal canal after an equal amount of spinal fluid has been withdrawn. Following the injection of arsphenamine or of the blood serum containing the drug a more or less marked reaction may be shown by dizziness, headache, nausea and vomiting, and sometimes a severe chill, followed by an elevation of temperature. The patient must be kept quietly in bed and closely watched for unfavorable symptoms. The diet should be liquid in form. An ice bag or compresses may be applied to relieve the headache, and heat should be applied during the chill.

Mercury is largely used in connection with arsphenamine, and during the period of treatment the function of the kidneys must be watched, and the urine sent weekly for examination as both drugs tend to have an irritating effect

PSYCHOSIS WITH BRAIN TUMOR

Physical symptoms. Severe and almost constant headache, often becoming worse at night, dizziness, nausea and vomiting, or vomiting without nausea and of the projectile type, slow pulse of high tension, arrhythmical respirations (Cheyne-Stokes), twitchings or muscular spasms in the face or hand, or convulsive movements of a side of the body, unequal pupils which as the disease progresses may become dilated, and blindness, are some of the more noticeable symptoms. Depending on the location and the degree of intracranial pressure symptoms may be much intensified.

Mental symptoms. Sensations may be dulled and the patient may be drowsy; confusion and hallucinations may be present, or consciousness may be clouded and lost in severe cases; speech may be aphasic and memory impaired; thought is slow and there may be delusions of a persecutory trend; the mood may be irritable or depressed; restlessness and over-activity are characteristic of some cases, but as the pressure increases the activity is diminished and may be suspended.

Nursing procedures. Bed treatment is usually prescribed, with careful attention to the diet, spoon-feeding when necessary, ice bag to relieve the headache, dim light and quiet, avoiding all noise and confusion. Keep the patient warm, for often when restless the covers are thrown off, and sensation being dulled no discomfort is felt. Note carefully the onset of the convulsion, where the twitching begins and how it spreads, whether beginning in a finger or hand and whether it spreads to the arm and face or goes down the body, how much of the body is involved and whether the contractions are severe or mild, and their duration in point of time. The attack may sometimes be checked if the part in which twitching begins is grasped and held firmly.

If nausea and vomiting are persistent and the patient is losing weight, the physician may discontinue all nourishment by mouth and prescribe saline and nutritive enemata per rectum for a while; then gradually, by giving very small amounts of liquids, the stomach may be accustomed to take care of food, and finally semi-solid and soft foods may be given.

When the symptoms are not too pronounced, these patients may, by having a book rest placed across the bed, look at pictures, read coarse print, draw or write for short periods, play simple games of solitaire and attempt some of the more easy forms of handiwork.

TRAUMATIC PSYCHOSIS

In this group are included those mental disorders which are caused by injury to the brain, usually the result of blows on the head. The symptoms depend on the extent and location of the lesion produced, and are those of pressure and the accompanying mental disturbances. The symptoms in many of these cases are relieved by surgical interference.

Neurological surgery makes special demands for definite nursing procedures. Following any operation upon the head, the patient should be most carefully and gently lifted, avoiding the least jarring as hemorrhage from the wound may occur, and if it increases the pressure death may ensue. The position in bed should be that in which the respirations are most free. It may be necessary to place the patient on the side, to draw the head forward or back, to hold the jaw and tongue forward. Mucus must not collect in the throat, for this impedes respiration and causes cyanosis. If vomiting occurs, care must be taken that no fluid is aspirated and that the dressings are not soiled. Keep the patient warm, protecting the shoulders well and prevent draughts. If the operation has been in the occipital region, the patient should be placed on the side to avoid pressure on the incision. All neurological as well as general surgical cases should have the position changed often to prevent pneumonia which sometimes follows the administration of a general anæsthetic.

These patients are often confused and restless, and care and supervision must be given to keep them in bed, for a fall will produce very serious results. Delirium frequently follows operations on the brain. Its character should be noted and every precaution taken to prevent injury. The bed should be enclosed by placing boards at the sides, and the patient must not be left alone. After consciousness has been regained there is frequently present the inability to appreciate position, for the sense of equilibrium is often disturbed. All surgical dressings should be securely sewed,

not pinned, and the patient must be prevented from removing them and infecting the incision.

PSYCHOSIS WITH HUNTINGTON'S CHOREA

This is a chronic form of chorea which occurs in adults. It is inherited and incurable. The movements consist of a series of writhing contortions. Speech is usually markedly disturbed, and the intellect gradually weakens to dementia. Some cases are depressed and have suicidal tendencies. Careful observation must be given and the usual nursing measures carried out. One of the difficult problems of the nurse is to keep these patients covered while in bed, and various devices must be tried to accomplish this, and at the same time allow as much freedom of movement as possible. Pajama suits in one piece which button closely about the wrists and ankles have been found useful, and give protection if the covers are thrown off. The bed must always be enclosed to prevent falls and injuries.

CHAPTER X

NURSING IN THE TOXIC PSYCHOSES

THE ALCOHOLIC PSYCHOSES

The alcoholic psychoses are mental disorders which develop because of the prolonged and continued use of alcohol. There are several forms: Delirium tremens, Korsakow's psychosis, acute hallucinosis, chronic hallucinosis and alcoholic deterioration.

Delirium tremens is an acute alcoholic psychosis characterized by delirium and a marked general tremor. The sudden withdrawal of alcohol, or physical injury, will sometimes precipitate an attack in a chronic drinker.

Physical symptoms. The onset is usually preceded by a feeling of malaise, coated tongue, loss of appetite, vomiting, gastric pains, rise of temperature, muscular tremors, which gradually become more marked, and insomnia.

Mental symptoms. The most prominent symptoms are delirium with vivid hallucinations. The patient sees snakes, rats and creatures in horrible shapes and forms, feels insects and worms crawling over his body and hears voices which abuse and upbraid him. Sounds are misinterpreted, persons are misidentified and orientation is lost. In order to escape from the hallucinations he crawls over the bed, jumps about, attempts to climb the wall, shouts from fear and is likely to injure those who interfere with his efforts to get away from his tormentors. There is marked restlessness and the patient picks at the bedding, pulls and tears his own and the bed clothes, beats the air with his arms and in many other ways may be in constant motion. In some cases the delirium is of the occupational form, in which the patient imagines he is carrying on his

usual business or occupation, and a teamster may for days and nights behave as if he were driving horses at a furious rate of speed.

Nursing procedures. This is an acute disorder which may last for a few days or a week, and every effort should be made to induce sleep. Keep the patient as quiet as possible and reduce to a minimum all sources of sense stimulation, and talk no more than is necessary. Give special care to the mouth, which is usually in a foul condition. Water should be given freely to drink, and light diet supplemented by liquid nourishment at frequent intervals should be given, for the strength is often exhausted by the incessant activity and struggling. Meat broths and dark meats must be avoided, for albuminuria is invariably present. The bladder and bowels must not become overdistended. For the delirium a continuous bath or cold pack is usually prescribed by the physician. Great care must be taken to prevent accidents or escapes, and a patient who is only mildly delirious must not be left alone, even for brief periods, for serious accidents have happened and are always imminent.

Occupations. Nothing should be attempted during the acute stage because the activity cannot be directed, but during convalescence the patient should be kept in the open air and gradually employed with light tasks. Exercise should be very moderate in the beginning and gradually increased.

KORSAKOW'S PSYCHOSIS

This form of alcoholic psychosis is usually accompanied by characteristic physical symptoms due to the presence of a polyneuritis.

Physical symptoms. For some time the patient may complain of neuralgic pains and tingling sensations in the hands and feet, and then muscular weakness and tenderness over the muscles and deep nerve trunks of the limbs are noted. As the disease progresses there may be both ankle and wrist drop due to the paralysis of the extensor muscles.

Mental symptoms. Perception is disordered during the acute stage for the patient misidentifies persons, is disoriented as to time and place and may have hallucinations. There is a marked defect of retention, and the events of the preceding moments are not remembered. To fill in and cover up the lapses in memory the patient will fabricate in a most extraordinary manner. The emotions are disturbed, and the patient may be very suggestible, responding quickly to whatever is said or proposed.

Nursing procedures. During the acute stage the patient must be cared for in bed. Pillows and pads should be arranged so as to give greatest comfort. The feet and hands should be supported by small pillows if necessary. Pressure over the areas of hyperæsthesia should be avoided and the bedclothes supported by means of cradles. As the acute symptoms subside, massage, muscle training and electric treatments are prescribed by the physician. Improvement takes place very slowly and care must be taken to avoid fatigue. To improve the memory defect, simple rhymes and easy exercises in memorizing numbers are given in the beginning, but as these are mastered the exercises may be made more exacting in their demand on attention and memory. Convalescence may be months in duration.

Occupations. Very little can be attempted in the beginning, but when the acute stage is over passive motion of the fingers and toes may be given, and the patient interested in training his own muscles, especially those of the hands. As fast as control is regained, simple tasks like pushing marbles and blocks about, grasping and moving crayons to color outlined pictures may be given. Other forms of light handicraft may be given as fast as improvement takes place. The exercise must be passive until such time as the physician permits the patient to use his limbs. Walking for a short distance or for a short period with support on both sides may be attempted, care being taken to avoid fatigue. These periods may be lengthened as the condition improves and simple forms of gymnastics may be tried.

ACUTE HALLUCINOSIS

The most outstanding symptoms are hallucinations of hearing, in which the patient hears voices which upbraid and threaten him, although consciousness remains clear, and orientation is not disturbed. Because of the hallucinations he is fearful, anxious and depressed, and may try to escape and even to attempt suicide. Restlessness and insomnia are also marked.

Nursing procedures. Keep the patient quiet and in bed. Give warm baths, plenty of fluids and easily digested food. Regular and free elimination are important measures. During convalescence, occupation and exercise should be provided. Recovery is usually complete.

THE DRUG PSYCHOSES

Several drugs valued in medicine for their physiological action, will, when their use is continued, produce serious mental disturbances. These are the "**habit forming**" drugs, so called because the system so readily acquires a dependence upon them and a craving for the relief which they afford from mental unrest or pain. These drugs are opium and its derivatives, morphine, heroin and codeine, and cocaine. There are other drugs which, while their continued use does not produce symptoms as grave as do opium and cocaine, are nevertheless dangerous because they, too, can enslave the user in a habit which is not easy to break. These are chloral, the bromides, phenacetine, veronal, headache powders and strong tea and coffee.

Opium and cocaine act on the nervous system, and the symptoms are principally mental, but there are also physical symptoms which are caused by their prolonged and continued use. These are, gastric disturbances, loss of appetite, loss of weight, anæmia, tremors, muscular weakness, easy fatigue, chronic constipation followed by chronic diarrhoea, pains all over the body, a peculiar pasty appearance to

the skin in morphine addiction, and a leathery appearance in cocaine addiction.

The mental symptoms are those produced primarily by the drug, an exhilaration or stimulation followed by soothing comfortable feelings, and in morphine addiction, by drowsiness and later by depression. Because of the last symptom, many who are addicted to morphine take cocaine also, for it furnishes the necessary stimulation during the period of depression. The symptoms which arise because of their continued use are, diminished will power, impairment of memory, loss of the finer sensibilities and moral degradation. They become untruthful, unreliable, neglectful of their family, will associate with persons of low character and take any means to obtain the drug. They become shiftless, inefficient, inattentive and unable to apply themselves to business, restless, unable to sleep; and delirium with hallucinations of sight and hearing usually follows. In cocaine addiction the deterioration of the mental powers and the moral sense tends to be more rapid than in opium addiction, but the discontinuance of the drug does not produce the serious physical effects which a sudden withdrawal of morphine would produce. **Heroin**, which came into use in 1898, was not as early included in the legislation which controlled the sale and use of opium and cocaine, and partly because it could be obtained more easily, and partly because the dose is smaller and, therefore, cheaper, and the ease with which it can be taken, for it is snuffed, its use by addicts greatly increased. Among them it is termed "Happy dust" and its slaves are largely among the youths and young adults. So extensively has it been used and so serious have been the results, that it is regarded as the most dangerous of these drugs.

Nursing procedures. To prevent the patient from obtaining the drug when it is withheld by the physician is a most important measure. This is often difficult, for in spite of the utmost precaution and watchfulness, it is sometimes obtained and secreted in the most unusual and incredible

places. For this reason these patients are kept in bed, and all clothing formerly worn is taken away. A cleansing bath in a tub should be given, the hair thoroughly washed, and an enema given. The cavities of the body, the ears, nostrils, etc., should be searched. After the bath and treatments the patient should be placed in another room and in a bed which he has not before occupied, or if placed in a ward, in a bed as far distant as possible from the one previously occupied. The general nursing measures are to build up the physical conditions by diet and extra nourishment. Baths which act as a tonic to the appetite should be given daily, and special attention given to the elimination. There are various forms of treatment which may be prescribed by the physician, and these must be rigorously carried out. When the drug is withheld, the symptoms often increase in severity and a delirium of a very active type may develop in which the patient makes violent efforts to escape and may become dangerous. Every precaution must be taken to avoid injury and accident. Keep the patient as quiet as possible and employ the usual methods for inducing sleep. Some form of hydrotherapy, the continued bath or wet pack, is usually prescribed to relieve the delirium.

Occupations. In convalescence the patient should be kept busy at some form of work in which he can be interested. Try to arouse him from his indifference and make his pride and ambition reënforce his efforts of self-control. This should be done not by censure or blame, nor by discussions, but by directing the thought and interest so that wholesome, useful and healthful desires will be substituted for what has been unwholesome, unhealthy and degrading. These patients are much in need of sympathy, for they are truly sick. The nurse should ever remember that the disease from which they suffer is not always due to weakness or inherent badness, but that it may be traced to some definite illness, to some unfortunate association and not infrequently to efforts at self-medication, for until a few years ago patent medi-

cines which contained these drugs could be obtained with little difficulty. To understand them, to appreciate and aid them in their struggles, and to keep before them some aim in life which may be a goal toward which their efforts can be directed, are ways in which a nurse can help these patients to a healthy and happy life.

The nurse's responsibility in administering these drugs is great. She should ever keep in mind that with neurotic and unstable individuals a repeated dose has the potentiality to weaken voluntary resistance and forge one more link in the chain of habit. She should remember the repeated testimony of addicts that no physical pain is comparable to the awful misery occasioned by an over-mastering habit. Intelligent, skilful nursing can do much to reduce to a minimum the necessity for using these dangerous drugs.

Many years ago the evils of drug addiction were recognized and individual states enacted laws to control the sale and distribution of the habit-forming drugs, but the numbers of addicts constantly increased, and the menace to health and the general welfare became so alarming that Federal legislation became necessary. In December, 1914, Congress approved a law known as the **Harrison Act**. On March 1, 1915, this went into effect, and provides that "every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, distributes or gives away opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof, shall register with the collector of internal revenue in his district," pay a special tax of one dollar yearly and receive a registry number. This law further provides that every person so registered when dispensing or distributing these drugs must use the special blanks issued by the Commissioner of Internal Revenue; that he shall keep a record of every sale, give a duplicate to the purchaser and keep all records for a period of two years, subject to inspection at any time. Every prescription written by a physician must be dated the day it is signed, must bear his name in full, his address and

registry number, and the name and address of the person for whom the drug is prescribed. "It shall be unlawful for any person not registered under the provisions of this Act . . . to have in his possession or under his control any of the aforesaid drugs, and such possession or control shall be presumptive evidence of the violation of the provisions of the Act." This does not apply, however, to nurses and other persons who are under the supervision of a registered physician and have obtained the drugs upon his prescription. The penalties, upon conviction, for failing to comply with or violating the requirements of the law are a fine of not more than \$2000 or imprisonment for not more than five years, or both, in the discretion of the court.

It is the duty of every nurse rigidly to carry out the provisions of this act in so far as they apply to her and whenever she knows of any violation of them. She comes in contact with people intimately in the home and in the district and may be the first to learn of a dependence upon these drugs, and hers may be the strong arm which will lift the patient to self-control and freedom. To her, also, is given the opportunity to help in the education of the public as to the dangers of drug addiction and to aid in the elimination of one of the serious causes of inefficiency, misery and crime.

THE AUTOTOXIC PSYCHOSES

Autotoxins are substances which are produced in the body in the process of metabolism and because of faulty elimination are retained in the body, or are substances produced by overactivity of a gland in such amounts as to become body poisons. These autotoxins give rise to various and oftentimes serious mental symptoms.

HYPERTHYROIDISM

This condition is also known as **Graves' disease** or **exophthalmic goitre**, and is caused by overproduction of the secretion of the thyroid gland.

Physical symptoms. Rapid and irregular heart action and feeling of suffocation are usually the most annoying symptoms. There may also be disturbances of digestion, anæmia, loss of weight, fine muscular tremors of the hands and profuse perspiration. The thyroid gland may show varying degrees of enlargement and the exophthalmus may be slight or marked. A white line of sclera between the iris and the upper lid which shows when the eyes are moved in a downward direction is usually noticeable.

Mental symptoms. Emotional disturbances are the most prominent. These are increased irritability, loss of control, excitement and anger on very slight provocation, anxiety, agitation and depression. In severe cases restlessness is marked and delirium may develop.

URÆMIA

This is a toxic condition caused by the presence in the blood of constituents which normally are eliminated by the kidneys. These substances when retained in the circulation act deleteriously on the nervous system.

Physical symptoms. Headache, nausea, vomiting, dyspnoea without exertion and often so great the patient cannot lie down, arrhythmical or Cheyne-Stokes respirations, edema of the extremities, twitching of the muscles and convulsions may indicate this condition. In chronic uræmia the skin is very dry and itching and muscular cramps are often severe. The urine may be scanty or suppressed, or it may be increased, and contains albumin.

Mental symptoms. Vision is often blurred and diminished and hearing is often rendered more acute. The patient may be confused, have illusions and hallucinations of hearing and sight, changeable delusions, and be anxious and depressed. Consciousness may become clouded and restlessness quite marked, and a low muttering delirium may follow, or the patient may become stuporous, pass into coma and die.

DIABETES MELLITUS

Diabetes mellitus is a "disturbance of metabolism," a condition in which the oxidation of glucose in the body is deficient and it is eliminated by the kidneys.

Physical symptoms. Great thirst, voracious appetite with a craving for sugar and starchy foods, loss of weight, dry skin and polyuria, which on analysis shows a high per cent. of glucose, are the most noticeable symptoms. Headache, nausea, vomiting, "air hunger" and a fruity odor to the breath are symptoms of approaching coma.

Mental symptoms. The patient may have illusions and hallucinations, be disoriented and confused, have hypochondriacal ideas, and delusions of self accusation, misfortune and persecution, be depressed and restless, and delirium may follow, or he may be drowsy and inactive and pass into coma.

The symptoms of delirium in the autotoxic conditions are usually less severe than those produced by alcohol and drugs. The patient lies quietly in bed, or is mildly restless, converses in ordinary or low tones with himself or imaginary people in a disjointed and incoherent manner, and the activity is more in the nature of habitual movements, smoothing the bedclothes, picking at a button, rubbing the face and hair, clasping the hands, etc. This quiet delirium may, however, suddenly shift to a more active form.

Nursing procedures. In addition to the special procedures required by the various diseases which have been treated in the lectures on medical diseases, the measures in nursing should be those which are employed in excitement, depression and delirium. In the recoverable cases the mental symptoms abate and clear up with the improvement in the physical condition.

CHAPTER XI

NURSING IN THE INFECTIVE-EXHAUSTIVE PSYCHOSES

The infective psychoses include those mental disorders which are produced primarily by the toxins of the infectious diseases, typhoid fever, pneumonia, scarlet fever, puerperal fever, malaria, small pox, influenza, etc., and are characterized by confusion, disorientation, hallucinations and delirium.

The physical symptoms are those of the particular infectious disease.

The mental symptoms may appear at the onset when the temperature begins to rise, during the fastigium or during convalescence. They may come on suddenly, or there may be a period during which the patient is confused and unable to recognize familiar surroundings on awaking, and gradually more marked disturbances of perception are apparent, disorientation, illusions and hallucinations often of a vivid and terrifying nature as of fire and disaster. Sensation may be rendered more acute in the beginning of the delirium, hearing is often distressingly so, but later there is a dulling of all the sensations with clouding of consciousness. The activity may be increased and the patient becomes noisy, excited, restless, tossing about and attempting to get out of bed, or the delirium may be of the low muttering type with occupational activity.

The exhaustive psychoses include those mental disorders which are due to exhaustion and probably disturbance in the nutrition of the brain, produced by prolonged and severe bodily illness. Some of the conditions which give rise to these disorders are prolonged and difficult parturition, prolonged lactation, tuberculosis, cardiac disease, rheumatism, acute anæmia resulting from inanition, hemorrhage and following severe surgical operations.

The mental symptoms in these conditions also are those of delirium, which may be acute with periods of remission in which consciousness becomes clear. These periods may gradually increase in length and the severity of the delirium diminishes and the patient recovers, or the delirium may become more severe and collapse and coma follow. Not infrequently chronic nervous exhaustion is a sequela of this condition, and the patient suffers from headache, backache, fatigue on slight exertion, feels unable to make any effort, is irritable, sleeps poorly, eats little and demands constant attention.

Nursing procedures. In all fever cases the mouth and lips are very dry, the tongue is coated, sordes collect on the teeth and the breath is foul. These conditions could give rise to the hallucinations of taste and smell which make the patient refuse food. The mouth should be cleansed thoroughly and regularly, the teeth brushed and the tongue scraped. If mucus has dried on the tongue it should be softened by the application of a little glycerine which has been diluted with water. There is always a loss of appetite, and although the diet must be that prescribed in the particular disease, the nurse should ever bear in mind that with the increased activity, both mental and physical, the need is greater that the patient should receive a sufficient amount of nourishment to make good the increased waste. Full feeding often becomes necessary to preserve life, and should consist of milk and eggs and other highly concentrated nourishment to which a stimulant may be added when prescribed by the physician. Water in generous quantities should be given regularly to aid in the elimination of the waste products. Much patience and persistent effort are required oftentimes to get the patient to take the necessary amounts of nourishment and fluids. Spoon-feeding is usually indicated, for too often the patient is too active or too busy, too dull or too languid to make any effort. Carefully watch the bladder and bowels, for elimination should be free. The skin, which may be dry and hot, should receive the usual

daily baths and sponges and whatever hydriatic measures are prescribed. After a cool sponge or a prolonged bath the mental symptoms may be so allayed that the patient goes off into sound and refreshing sleep. An ice bag applied to the head, or cold compresses over the forehead and eyes, will sometimes do much to lessen the mental activity. Every source of sense stimulation should be eliminated and absolute quiet should prevail. Do not permit conversation in the room and move about as quietly as possible. Keep the patient from injury during the periods of excitement and depression. As much fresh air as possible should be provided, and whenever feasible the patient should be sufficiently protected and the bed rolled into the open air, or placed close to an open window.

Occupation. Convalescence is very slow and the patient is usually much weakened and is easily fatigued, and upon the nurse devolves the duty of arousing interest by reading aloud and telling stories, exhibiting pretty and useful articles which have been made in the occupation department, etc. As the physical strength is regained the desire to do something is usually expressed, and some forms of light handiwork which make little demand on the physical strength, may be given for short periods. Gradually more time each day may be spent in this way.

CHAPTER XII

NURSING IN THE CONSTITUTIONAL PSYCHOSES

MANIC-DEPRESSIVE PSYCHOSIS

This disease is characterized by recurring attacks of acute emotional disturbance, elation or depression, without deterioration, and by recovery from the attack. The attacks are in one of four forms, manic (excited), depressed, mixed (comprised of both manic and depressed), and circular (characterized by a manic attack followed by a depressed attack).

Manic attacks: Physical symptoms. There is motor restlessness and general overactivity. The face is flushed; the eyes may be more or less injected; the mouth and lips are dry, or the mouth may be frothy from incessant talking; the skin feels hot and dry; the temperature may be slightly elevated and the pulse rate increased.

Mental symptoms. Emotionally the patient is happy and elated, and may be playful and mischievous, or combative and antagonistic. Disturbances of attention and the stream of thought as shown by distractability and flight of ideas are prominent. The patient is almost incessantly chattering and the speech is characterized by an excessive flow of words which are glibly spoken. The conduct is overactive, and may be impulsive, violent and destructive. Memory shows no impairment; hallucinations are rare and fleeting; delusions are few; consciousness remains clear except in great excitement when there may be clouding and the speech may be incoherent.

Nursing procedures. These patients are kept in bed during the period of acute excitement, isolated in a room where quiet is possible and all sources of sense stimulation

are reduced. Unnecessary furniture, articles and pictures should be removed and visitors excluded, except when authorized by the physician, for these patients are so impressionable that the least sound, movement or change is noticed and immediately calls forth some response. Special care should be given to the mouth, tongue and teeth, and the lips should be kept moist by the application of glycerine or vaseline. The usual baths will tend to relieve the dryness of the skin. The fingernails should be closely trimmed to prevent scratches. Special attention should be given to the diet, for in all cases of overactivity nourishment and fluids must be taken in sufficient quantities to make up the depletion. Often the patient is too busy to eat, and much time and perseverance are required to accomplish results. Utilize the factor of distractability by diverting the attention in ways already described, and spoon-feed the patient. By taking advantage of every opening a full meal may sometimes be administered. Avoid, in so far as possible, everything which tends to irritate the patient. Do not enter into discussions and keep in mind that abrupt, sharp or sarcastic answers are a frequent source of irritation. Tactfully avoid answering questions which would lead to discussions by diverting the attention to something else or by asking a question which demands an immediate answer. Control the activity by distracting the attention to something else or suggesting some other form of activity, and avoid peremptory commands to desist or to do, for these too often have the effect of strengthening the determination to persist in the undesirable activity and make management much more difficult. Sharp answers, peremptory commands, discussions and conflicts frequently lead to violent attacks, for the power of inhibition is so diminished that the patient does the first thing which comes into mind without considering the consequences. Prolonged and continuous baths and wet packs are usually prescribed by the physician to aid in reducing the excitement. Too often patients in hospital receive the impression that the pack is a form of

punishment, and every nurse should do all in her power to banish this idea and establish the correct one that it is a valuable measure of treatment which the physician alone prescribes. When baths and packs have been continued over a considerable period of time, the skin may become excoriated from the friction against the wet sheets and hammock, and special measures must be taken to prevent this condition. Upon removing the patient from the pack, a shower or sponge bath should be given, the skin thoroughly dried and rubbed well with alcohol and a dusting powder applied to any parts which are reddened. If there is evidence of rash or other unusual condition, the physician should at once be notified, for packs and baths may be contraindicated. The measures which may be employed during periods of excitement have already been described in a previous chapter, and these should be made use of when indicated. Sleep is of the utmost importance, and the nurse should exhaust every means at her command to induce it, and only as a last resort should she make use of the drugs which have been conditionally prescribed. There is, perhaps, no surer test of good nursing than to be able to get one's patients comfortable and quiet without sedatives, and to sleep without hypnotics.

Occupations. As soon as possible, try to direct the activity of the patient, for the restlessness and constant movements are merely the outlets for the increased mental activity. Only those forms of work which make use of the coarser movements should be attempted; tearing rags for rugs and rolling them into balls, tearing bandages and later rolling them, rake knitting and knitting on large needles with coarse yarn may be tried. Some tasks in the house-keeping, brushing the floor, sweeping a rug, washing small articles, scrubbing a table top or shelf and pushing a floor polisher, may also be given. Destructive tendencies can be directed to picking hair, ravelling old stockings and bed spreads and tearing strips for rugs. As the acute symptoms subside, long walks in the open air, skating, gymnastics,

bowling, weights, dancing, etc., may be permitted. In the choice of games it is better to avoid those which have a competitive element in the beginning, as this is likely to prove too stimulating and precipitate excitement. Gradually, as emotional control is gained, this element may be introduced with benefit. Music and dancing are always enjoyed, and when the activity can be directed in no other way, the patient will dance, and finally sit quietly and engage in some form of handiwork.

Restraint in many and various forms was once much employed for the control of maniacal and delirious patients, but it is a form of treatment which has gradually been discontinued and many hospitals to-day do not permit its use. Hydrotherapy has been substituted with gratifying results. In hospitals where it is still employed the rules governing its use and application are very strict. The forms which are authorized are prescribed, as well as the duration of the treatment and the keeping of records regarding the same. Only in extreme cases of excitement, when no appeal is comprehended, and the patient becomes a danger to himself and to other patients, the physician orders the application of the protection or safety sheet. This allows some freedom of movement, but at the same time controls the aimless, violent activities. Not infrequently the patient is so exhausted that he will go to sleep soon after being placed in the protection sheet, and will wake up quiet and manageable.

During this treatment the patient must be watched carefully, the pulse and respiration should be taken frequently and water given freely. The face and neck should be bathed with cold water and an ice bag applied to the head. When removed from the sheet, the patient should be given a bath, fresh bed gown and placed in a bed which has been newly made.

Depressed attacks: Physical symptoms. The skin looks dull, feels cold and is usually moist; the hair is dry and the fingernails are brittle; the temperature may be slightly subnormal; the pulse is slow; the tongue is coated; the

appetite is poor, and there may be anæmia and loss of weight, for in depression all the physical functions are lowered or diminished. The patient may complain of headache in the top of the head, a symptom which may be constant in some cases, and always more severe in the early morning.

Mental symptoms. A depressed emotional attitude is the most outstanding symptom. The patient looks sad and despondent and says he feels "downhearted," makes few movements and these are performed slowly, sits alone and pays little attention to what is going on about him, for his thoughts are centred about himself. Hallucinations may be present and delusions of a depressive character, of unworthiness and of self accusation, are common, and suicidal tendencies are invariably present. In severe cases psychomotor retardation becomes prominent and accompanies feelings of insufficiency. The patient has few ideas, thinks slowly and with difficulty and speaks and moves slowly. The depression may become so profound that the patient becomes stuporous, fails to respond to ordinary stimuli, assumes catatonic-like positions and makes no voluntary movements. In this condition the heart action becomes weak, the pulse very slow, the temperature subnormal and the skin and extremities cold.

Nursing procedures. Because of the physical condition, which is generally subnormal, these patients are cared for in bed until such time as both the physical and mental condition show improvement. Vigilance, extreme watchfulness, takes precedence over all other nursing measures, for in every case of depression the danger of suicide is a very real and ever-present one. It must not for a single moment be forgotten, for to the depressed patient "memory of the past is misery; the present is unbearable; and there is no hope in the future." These patients must not be left alone in the dining-room or during meals, in the bathroom, or at any time, for they show the utmost ingenuity and resourcefulness in planning suicide, and at all times it is the one

most prominent and absorbing idea. A favorite scheme is to appeal to the sympathy of the nurse, who will accede to the wishes of the patient, and allow a little more freedom, hoping by the confidence thus displayed to help and encourage him; then, when vigilance is a bit relaxed, the attempt is made and sometimes carried to fulfilment. It sometimes becomes necessary, especially after visits and recreation, to search the clothes, the bed and the room for articles which may be secreted for the purpose of self injury or destruction. This should be done in such manner as to bring as little discomfort as possible to the patient, avoiding the disclosure of distrust and lack of confidence. The clothes may be taken away by giving a bath, and the bed and room may be searched while the bath is being taken. These patients should be cared for in a bright sunny room or ward, made cheerful by bright hangings, flowers, magazines, books, etc., and the nurse must see to it that an atmosphere of cheerfulness and hopefulness surrounds them at all times. The food must be daintily and attractively served, and all the small tricks and ways of preparation and service must be resorted to and made use of to get them to eat, for very often food is refused because they think they do not deserve it, or have no money to pay for it, or will deprive others who need it more, or because they are determined not to live longer and take this means of accomplishing the result. It is of the utmost importance that they take a sufficient amount of nourishment each day to sustain nutrition and build up the depleted condition. Frequently this can be accomplished by spoon-feeding, but in some cases all measures fail, and the physician has to resort to feeding by tube. Insomnia must be combated by measures already described. These patients must be kept warm, for sensation is often dulled and they will not complain of feeling cold. Massage is beneficial, for it is a tonic and stimulant to the circulation. The salt glow is often prescribed for its tonic effect.

Occupations. As fatigue comes easily, light tasks for short periods should be given. If the patient is about the

ward, some housekeeping task which requires little conscious effort is best; washing a pane of glass, dusting a table or chair, watering a plant, washing the leaves of a palm or some bit of needlework like sewing on a button may first be given. As these tasks are accomplished with more facility, other forms of needlework, embroidery, tatting, drawing, copying, painting, raffia and reed basketry, crochet and knitting may be given for longer periods, taking care always to avoid fatigue. This is shown by impatience either with one's self or with the results of one's work, flushing of the face, inability to fix the attention, and a speeding up or hastening in execution. All occupational work should be useful, either needful in the house or to serve some definite purpose, and not something to be done merely to keep the hands busy. If the piece of work or article is to be given to a relative or friend, or to be exhibited by the hospital when finished, there is a motive for work which is a healthy stimulus to voluntary activity. Precautions must be taken whenever scissors, steel crochet hooks or knitting needles are used, and these should not be given to very depressed cases. Whether the occupation should be one with which the patient is already familiar or should be something new depends upon the individual case. If a particular form of work is known to have been a factor which contributed to the patient's illness, or if the belief exists in the patient's mind that it precipitated his breakdown, it is obviously better to avoid it and have the occupation take a radically different form until such progress towards health has been made that the physician feels it can be given. Hours, days and even weeks are sometimes required to find just the form of occupation which will arouse the patient's interest and create the desire to be employed. The nurse is not unlike a locksmith who must try many keys to open a lock, and she must not be disheartened or discouraged by many failures, for there is always one key which will fit, but it is not always the same one. To one patient an appeal to the color sense, to another the use of skill acquired in earlier years, to another

the love of beauty or form, or novelty or association may be the key which unlocks the interest and liberates desire which is the direct stimulus to voluntary activity. When there is a feeling of unreality, there is nothing better to help the patient than the performance of some task which he has many times performed when well. This can best be done by having the patient work with the nurse. Whatever the occupation, it should be one which can be finished in a rather short period, because the satisfaction which accompanies the completion of a task is in itself quite stimulating. When new work is undertaken, help the patients by rather close instruction, for many are sensitive and will not ask for guidance, and because they cannot proceed become upset and worried, lose interest and the attempt ends in failure, and very often they cannot be induced to again try that particular form of work. Encouragement and frequent assurance that the work is being well done and will bring much pleasure to the person for whom it is intended, or to the physician or to the director of occupations should be given.

For men the occupations may be reed basketry, canning, some forms of carpentry, brass work, leather tooling, making scrap books, reproducing designs of furniture in cardboard, constructing and furnishing houses and gardens from magazine pictures, reproducing in enlarged form the flags of various nations, collecting stamps and post marks, copying, translating, modelling in clay, some forms of gardening, planting seeds, testing seeds with blotting paper, sprouting wheat seeds in a sponge, etc.

Because these patients are so easily fatigued, the exercise should be limited in the beginning to short walks in the open air, drives and motor rides. Gradually gymnasium exercises, raking of the grass or leaves, light forms of garden work, tossing football or medicine ball, croquet, tennis and baseball may be attempted. Dancing is beneficial, for a patient cannot continue to feel sad when the muscles are responding to quick, bright music.

Music, reading aloud from magazines and short story books something which is bright and cheerful, games like solitaire, letters, dominoes, authors, flags, birds, etc., pool, billiards, puzzle pictures of not too many pieces, bean bag, ring toss, charades, small parties, afternoon teas and moving pictures wisely chosen will furnish diversion. In the beginning these patients do better when kept in small groups, or when work is individual, because to strive and struggle to keep up with others in a group or class often proves to be tiring and discouraging. Gradually the competitive element should be introduced into their work and play, for it is a stimulating factor which will be beneficial.

✓ A well-known physician has said, "A cheerful, intelligent nurse of good judgment can do more for these patients than all the doctors and drugs in creation."

INVOLUTION MELANCHOLIA

This is a form of mental disease which occurs after middle life, characterized by an anxious depression, developing slowly and pursuing a prolonged course.

Physical symptoms. Insomnia, loss of appetite, loss of weight, palpitation and dyspnoea, with feelings of distress or discomfort in the chest and about the heart.

Mental symptoms. The patient is irritable, anxious, fearful, often very sad; has delusions of persecution, misfortune and self accusation, of some sin committed many years before for which punishment must be endured; and may have hypochondriacal ideas. Orientation is not disturbed; memory is not much impaired, but there may be some retardation of thought. Hallucinations of sight and hearing may be present. In conduct the patient is restless, agitated, moves about uneasily, picks and rubs the face, pulls the ears, bites the nails and knuckles, repeats over and over such phrases as "Save me," or "Let me go home," etc.; or, the patient may be mute and inactive, overwhelmed with despondency and have suicidal tendencies.

Nursing procedures. Rest in bed with liberal diet supplemented by special nourishment is usually prescribed. Food is often refused because of the delusions. Regularity in bathing and elimination should be established. When the patient is fearful and apprehensive and seems stubborn and resistive, explanation of what is about to happen or to be done will help to allay the fear and afford relief and comfort for a little while. Avoid pulling, pushing or forcing the patient, and by persuasion accomplish what is desired even though a good deal of time is consumed. If persuasion fails, the attention should be diverted and results obtained by other methods. It may be necessary to bandage the hands if the patient picks much at the face, but it is far better to employ them by some form of light work. It should be remembered that the agitated, restless movements are largely reflex, and are the outward expression of the painful thoughts and feelings. These activities should be controlled by occupation, for any work which may be done by the hands makes demands on attention which will, for the time at least, crowd out the disturbing thoughts. Watchfulness is necessary at all times to prevent self injury and destruction. Other nursing procedures are much the same as in the depressive psychoses.

DEMENTIA PRÆCOX

This is a term which is applied to “a group of mental disorders, occurring chiefly in youth or early adult life, showing a wide range of symptoms and leading to various degrees of mental deterioration which is exhibited mainly in the patient’s conduct and emotional reactions.” Schizophrenia is another term by which it is known.

Physical symptoms. The physical condition may be below normal, with loss of appetite, loss of weight, insomnia, anæmia, fatiguability and cyanosis of the hands and feet. In many cases the physical symptoms are not present.

Mental symptoms. Orientation is not disturbed, memory

shows no impairment and the general knowledge is well retained in the early stages. Hallucinations are common, and the attention may be so absorbed by them that little notice is given to what is happening in the environment. The stream of thought is gradually narrowed and ideas become scattered. Judgment is defective and delusions are common. The mood in the beginning may be despondent, but tends to become indifferent and apathetic, and experiences, both pleasurable and painful, fail to arouse the corresponding emotions. Disorders of conduct are shown by overactivity, impulsiveness, negativism, suggestibility, catalepsy, stereotypy and mannerisms.

There are four forms of dementia præcox usually described, but these cannot always be sharply differentiated from one another and all may show quite similar terminal stages: (1) Simple, (2) hebephrenic, (3) catatonic, (4) paranoid.

In the **simple form** the patient shows a loss of interest in the affairs of life, is inclined to be idle, careless of personal appearance, neglectful of the usual duties, and to spend the time in musing or day dreaming. Hallucinations and delusions do not occur in this form.

The **hebephrenic form** is characterized by silly, meaningless laughter without apparent cause, grimaces, peculiar attitudes, hallucinations of hearing and sight; the delusions are usually silly and fantastic and change often, are frequently of a religious and erotic nature, and may be of a depressed type and the patient will express ideas of self destruction; thought is disconnected and ideas become few; unusual and peculiar words are used in peculiar settings, and speech may become monosyllabic or suppressed; the personal appearance becomes more untidy and bad habits are formed. The patient gradually becomes more listless and disinterested, tending more and more to withdraw from the world of reality and live in the fancied or dream world of his own creation, and mental weakness and dementia follow.

The **catatonic form** is characterized by disorders of con-

duct, muscular rigidity, resistiveness and negativistic tendencies, suggestibility shown by the maintenance of given positions and the repetitions of the words and movements of others, retention of saliva in the mouth, drooling, refusal of food, mutism and stupor where consciousness is clouded and all voluntary activity suspended. Periods of excitement may alternate with the stupor, during which the patient becomes very active, tossing about and shouting the same words over and over with no appreciation of their meaning. Sudden impulsive acts may also alternate with catalepsy.

The paranoid form is characterized by many hallucinations and delusions of persecution which are most improbable, impossible and absurd. The conduct may be assaultive because of the delusions.

Nursing procedures. When indicated measures should be taken to improve the physical condition, establish regularity in eating, bathing, elimination and all the usual activities, for in dementia præcox the habits are generally quite disorganized. The most important measure of treatment is to prevent and retard the deterioration which is always imminent and progressive unless it is checked by arousing the patient to new interests. Old and unwholesome habits must be broken up and discontinued, and new and healthful ones substituted. To do this requires kindness, patience and firmness in large measure. Begin by arousing an interest in the personal appearance and correcting errors in daily habits. A new ribbon may create a desire to keep the hair more tidy, and a new dress or pair of slippers, a necktie or cap may be the reward for dressing with more care for a given period. Rest periods should not be permitted during the day, unless prescribed by the physician; and lounging about in slovenly attitudes, with the head covered and the body in cramped positions should be prevented. The tendency to hide in dark and unusual places, to be alone, should be combated by keeping the patient in a group. The patient must be guarded against himself, for vicious habits are so easily acquired.

If food is refused and all persuasive measures fail, the patient must be fed like any helpless patient, taking the usual methods to induce eating. If these measures fail, feeding by tube becomes necessary. Some patients of this group are tube fed for months, but always the effort should be persistently made to have them take food in the usual way. Bed treatment is usually prescribed for patients who have to be forcibly fed in order to conserve their strength. In the catatonic form the bladder and bowels are not as a rule emptied voluntarily and overdistention must be prevented. In this form, too, positions which are very uncomfortable and strained are maintained for long periods, and the nurse should keep this in mind and change the position often. Brisk rubbing after baths and massage should be given to quicken the circulation. Cyanosis of the hands and feet is not uncommon, and every least scratch or abrasion should be carefully treated, for these may lead to serious infections which are healed with difficulty. Sudden, impulsive acts are common and must be guarded against.

Occupations. As the tendency is strong to be idle and to dream, every effort should be put forth to arouse the patient's interest and keep him occupied. The attention is so absorbed by the hallucinations and delusions that details are scarcely noticed and all tasks are usually poorly executed; but by careful, patient, persistent supervision and training, improvement is made, and many of these patients become good workers. Because of inability to adapt themselves to new conditions, the work should not be abruptly changed, for they lose interest and refuse to work at all. It is better to allow them to keep on with the tasks they have learned to perform fairly well, and gradually to include the new work with the old until the change can be made without upsetting them too much. The daily care of one's room, sweeping, dusting, light cleaning, washing dishes and small personal articles and ironing them are some of the needful duties of housekeeping which they may assume under supervision. Simple handiwork, stringing beads, paper weaving,

easy sewing, crochet, knitting, etc., may also be given. One patient was occupied for years embroidering flags on pillow tops, and could not be induced to change the work, always insisting upon having a similar piece when one was completed. To her the work never became monotonous and she was interested and did it fairly well. It is better, however, to change the form of work occasionally if possible, for any bit of work repeated day after day tends to make less and less demand on attention, and so fails to accomplish best results.

Making calendars on which each day is marked by some appropriate emblem or picture cut from a magazine which portrays some special event or happening which made the day pleasant or unusual, and weather calendars which have already been described, make demands for observation, reflection and execution. When these calendars are kept by groups of patients in a ward and form a part of the mural decoration in the sitting room or solarium, a healthful rivalry is often aroused which proves stimulating.

Sometimes it is very difficult to interest these patients in any form of work, but by watching the spontaneous activity a clue is often gained which will indicate the form of occupation which may be suggested. A patient who could not be persuaded to enter upon any task suggested by the nurse or director of occupations unravelled the stockings she was wearing and with a bent hairpin made a mat. When a crochet hook and bright threads were placed within her reach she kept busy for hours making tiny baskets and dolls' bonnets. The marketable value of the work must be disregarded, for it is a problem primarily of finding work for idle hands. One of the most outstanding first results of occupations for the hands has always been an improvement in personal habits, and some of the most stubborn cases of untidiness have been controlled and cured by arousing interest in manual work.

For the younger patients of this group games have been found useful in training attention and arousing interest, for the instinct of play is usually strong. Games carried out

to music, "Going to Jerusalem," or "Drop the handkerchief" and "Clap in and clap out" and the singing games, "Round and round the mulberry bush," "London bridge is falling" and "Have you seen the muffin man?" are very good, for the patient must become one of a group and assume social relations with the group which afford good training in adaptability, and the rhythm of the music tends to make the responses more prompt. Games of tag in which the remark "You're it" is accompanied by a tap on the shoulder are also useful in training for quick reactions. "Hunt the slipper" and "Hide the thimble" help to develop initiative. Gymnastics in small groups may also be encouraged, and good results may be expected, for these patients are suggestible and imitate well. Folk dancing is a most valuable means of exercise and recreation.

For the men patients of this group out-of-door occupation is desirable. Mowing and raking grass, sweeping walks, simple gardening are tasks which may be performed by even deteriorated cases and provide exercise as well as occupation. Tossing football, basketball and medicine ball will help to make the reactions more swift and exact. Ring toss, bean bag, potato race and peanut hunt are games in which the competitive element is strong, and this is a helpful spur to activity. Gymnastic drills with wands and dumb bells will provide exercise and help to train attention. Other occupations should be provided to prevent idleness and unhealthy ruminations.

Re-education includes all the measures which are taken to develop the latent capacities and to correct old and erroneous habits. This may assume the formality of a class with definite instruction in which the methods are simple, direct and attractive. The first steps with a group which shows deterioration may be to get them to stand in line, to march to music, to form a circle and join hands and move about to music, to run, to skip, etc. When these simple exercises are done with a fair degree of proficiency and accuracy, others which demand more attention and

voluntary direction may be tried. These play movements may alternate with elementary instruction in which a simple direct appeal is made to stimulate sensation, develop perception, gain attention and train memory. Self expression should be encouraged and utilized and so develop out of what is already present other interests and responses which are sought for and desired in the treatment. Because these patients are inattentive to external impressions the stimulus must be strong, and something which can be seen and handled, blocks, squares, triangles, the blackboard, colored crayons, charts and models should be used. Attention can always be more readily gained when the proper sort of bodily attitude is assumed, and many times a given attitude promptly calls forth the desired response. Over and over the same ground must be covered, and over and over responses which are desirable must be emphasized and repeated. Through these lessons the patients are awakened from indifference and apathy and are taught habits of tidiness, orderly conduct and self reliance, and gradually resume interest in what is going on around them.

PARANOIA

This is a form of mental disease which occurs usually in adult or middle life and is characterized by the gradual development of an unchangeable progressive system of delusions, without marked mental deterioration.

The physical symptoms are those incident to worry, loss of sleep, etc.

Mental symptoms. The mind shows little impairment. Memory is correct, orientation is not disturbed and consciousness is clear. Oftentimes there are hallucinations of hearing in which voices are calling the patient bad names, slandering and plotting against him. The most outstanding symptoms are the delusions of persecution, which are persistent, unchangeable and systematized, and strongly defended when attacked. They are not always absurd; and although

the ideas are false they are so skilfully combined and woven together that the resulting scheme may appear reasonable. The emotions are determined by the delusions. The personality gradually undergoes a change, for in order to satisfactorily explain his persecutions the patient begins to think he must be a very unusual and important person inasmuch as everything which transpires about him seems to refer directly to himself, and he finally believes he is a great personage. Voices may tell him he is appointed by God to perform a definite mission, and this only confirms his belief in his importance and he thereupon becomes equal in power to the Deity. The conduct is orderly except for occasional assaults due to the delusions. An intense hatred of individuals is oftentimes developed and fostered by the delusions, and the patient sometimes becomes very dangerous, for in order to avenge his fancied wrongs and to correct what in his judgment is not just or right, he will commit acts of violence.

Nursing procedures. As these patients are irritable, suspicious and quarrelsome, constantly on the lookout for slights and evidences of unfriendliness, much tact is required in caring for them. Whatever seems to irritate or annoy them should be removed in so far as possible, and references to whatever is known to be included in their delusions must be carefully avoided. They should be regularly occupied with some useful work in which they may be interested, and which of course does not conflict with their delusions. As the intellectual impairment is so slight they can many times be given work which carries some degree of responsibility and this always makes a special appeal. The care of the library, cataloguing, bookbinding, bookkeeping, story writing and translating, leather work, block printing, wood carving, carpentry, basketry, weaving, the study of languages or science, reproducing colonial doorways and the study of architecture are some of the ways in which they may be employed. Many enjoy books of science, history and biography; and music, dancing, all the various indoor and

outdoor games, sports and diversions should be provided. Careful observation and supervision are required at all times to prevent accidents.

EPILEPSY

This is a disease which is characterized by attacks of sudden disturbance of consciousness with or without convulsions and tends towards mental deterioration.

The symptoms may be mild or severe. In the mild form or *petit mal* there may be a feeling of dizziness and temporary loss of consciousness with or without muscular spasm, or there may be slight muscular twitching with very slight momentary loss of consciousness, and the patient proceeds with whatever he was doing.

Grand mal is the type usually seen in hospitals. The convulsions are severe and unconsciousness is prolonged. The attacks are often preceded by an "aura" or warning, and the patient complains of unusual sensations, numbness, a peculiar taste, a bright light, etc., then cries out and losing consciousness falls heavily, "as if shot." This disease was at one time called the "falling sickness." Injuries are frequent, because in falling no attempt is made to protect or save one's self. The tonic stage immediately begins; the whole body becomes rigid, the jaws are fixed, the eyes open and staring or rolled backward, and the face becomes increasingly cyanosed due to the loss of the respiratory movements. This stage lasts but a few seconds and is quickly followed by the clonic stage, marked by convulsive action of all the muscles, mild at first, then becoming violent, then less severe and finally ceasing. The body then relaxes and the patient lies unconscious, breathing heavily and often frothing at the mouth. During the convulsion the tongue is bitten and urine and feces are passed involuntarily. On regaining consciousness there are muscular soreness, headache and confusion during which certain movements may be automatically performed. While in this state of bewilderment some patients become dangerous.

Status epilepticus is a condition in which the convulsions are almost continuous, one attack follows another with only short intervals between. Consciousness is not regained, the temperature is high, the pulse and respirations are increased in rate and exhaustion may soon follow; or the intervals between the attacks may lengthen, the convulsions become less severe and recovery ensues. This condition may occur at any time during the course of the disease, although it usually proves terminal.

Instead of the convulsions there may be certain states which are known as the "**equivalent**." These may take the form of simple excitement, or of furor in which the patient becomes noisy, violent, destructive, even homicidal, refuses food, is disoriented and consciousness is clouded; or, of dream states in which the patient is dazed, disoriented and has hallucinations; or, of ecstasy in which the patient is extremely happy and has hallucinations — hears beautiful music and sees heavenly visions; or, of automatic states in which the personality is different, and the patient has no memory of his former self, wanders away, engages in unfamiliar work, but lives and acts in such manner as not to arouse suspicion that he is in an abnormal state.

In the **intervals between attacks** some epileptics are bright, good natured and able to carry on their regular work, but many others are irritable, egotistical, selfish, stubborn, abusive and quarrelsome, and show frequent outbursts of anger on very slight provocation. The mental condition becomes gradually weakened, and sensation, perception, attention and memory show impairment. Delusions and hallucinations may occur, but orientation is usually not disturbed.

Nursing procedures. Carefully note the character of the aura and where the convulsions begin. Loosen the clothing about the neck and waist, so that the respiratory movements may be free. Place a cork or padded mouth gag or clothespin between the teeth to protect the tongue which otherwise may be badly mutilated. If the attack

begins while the patient is eating, try to remove the food from the mouth and place the head as low as possible to prevent aspiration and choking. If the patient falls on to the floor, make no attempt to move him, but straighten the body and place in position in which least injury can be done; place pillows or folded blanket or garments under the head and arms; hold the jaw forward, wipe the mucus from the mouth and let the convulsion work itself off. After the muscular movements cease, place the patient in bed, change the clothing, bathe the face, treat the mouth by swabbing with antiseptic solution and apply an ice bag or cold compresses to the head.

Other nursing measures should be to establish regularity in diet which should be simple, of easily digested foods served in limited quantity, for these patients tend to overeat, to crowd and push the food into the mouth and choke. Not an uncommon occurrence when supervision is relaxed is the aspiration of a large bolus of food, often with fatal consequences. Meat should be sparingly given, and the evening meal should always be light, for attacks are more frequent during the night, and indiscretions in diet will often produce an attack. Regularity in bathing and elimination is very important. Constipation is a common ailment and seems to contribute in causing attacks. Give water freely to drink, for this is a valuable aid in elimination. In status epilepticus sedatives are given per rectum, and the nurse may have to administer chloroform to lessen the severity of the convulsions, but this is never done without an order from the physician.

Occupations. While some intellectual people have been subject to epilepsy, the general tendency is towards deterioration, and in patients who come to hospital this symptom is more or less pronounced. The occupation must, therefore, be adapted to the individual patient. Some simple, easy work may be given, but never near a stove or radiator, hot water or machinery, or where there is any danger from falling. The use of pointed scissors or other sharp instru-

ments like knives should not be permitted because of the danger of sudden and unprovoked attacks on other patients. This is especially to be guarded against after a convulsion. These patients are very stubborn and resistive and much ingenuity is required to secure their coöperation. Do not argue about a given piece of work for little can be accomplished in that way, and it is far better to change to something which will be done more willingly. It is well to bear in mind that any work which is willingly undertaken will be better executed than that which is undertaken half-heartedly or performed because of strong persuasion. Keep in mind also that it is better to make instructions and directions positive rather than negative, to say "Please do this," rather than "Don't do that." Check undesirable tendencies and responses by first diverting the attention and then substituting something else which is desirable. Often an appeal for assistance in the nursing work will bring the most prompt response, and working with the patient for several days, giving rewards in words of commendation and appreciation and in the many ways a nurse can, will help to arouse an interest and create a desire and willingness to work which will result in daily occupation.

Whenever possible these patients should be kept out of doors, walking, doing simple gardening and exercising by making use of some of the more active games. Various forms of handicraft, simple sewing, crochet and knitting with bone needles, and games adapted to their mental capacity should be employed for occupation and diversion. There is always a much diminished capacity for application to any form of work or activity, and great results must not be expected.

THE PSYCHONEUROSES

The psychoneuroses include neurasthenia, psychasthenia and hysteria.

Neurasthenia is a nervous disorder, or neurosis, characterized by mental and physical fatiguability, irritability

of mood and various hypochondriacal ideas. It is commonly called "nervous prostration."

Physical symptoms. These are loss of appetite, loss of weight, although sometimes these patients are well nourished, headache with feeling of weight or pressure or of a tight band about the head, insomnia and feeling of exhaustion on awaking, muscular weakness and fatigue on slight exertion, constipation, gastric and cardiac distress, pain in the back of the neck and at the end of the spine and many other discomforts.

Mental symptoms. These patients are over-sensitive to external impressions especially of sound — the wind, the trees, the crickets and natural sounds which are beyond control, or of sounds which originate from people, humming, whispering, talking, creaking of shoes, closing of doors, etc. They are self centred, irritable, anxious, depressed, restless, unable to apply themselves to any mental work and have many hypochondriacal ideas.

Psychasthenia is a more serious disorder of the nervous system, and is characterized by obsessions, phobias, doubts and feelings of anxiety and insufficiency. It is sometimes called a "border line" disorder, for it lies between a neurosis and psychosis and has characteristics of both.

The physical symptoms are much the same as in neurasthenia. **The mental symptoms** are obsessions — ideas which besiege and possess the mind against the desire and will, phobias or morbid fears of crossing open spaces and bridges, of high places, of closed rooms, of being alone, of the dark, or dirt, etc., doubts about insignificant matters like closing a door or posting a letter, inability to decide even the simplest matters, what to do next, which shoe to put on first, etc., feelings of anxiety and insufficiency, of being unable to do what is expected of them and of being unequal to the duties of life.

Hysteria is a morbid state of the nervous system in which the mind produces symptoms simulating some forms of organic disease.

Physical symptoms. These patients are as a rule well nourished, but there may be loss of appetite and loss of weight. Other symptoms may be nausea, vomiting, difficulty in swallowing, "globus hystericus," rapid or slow pulse, rise of temperature, dyspnœa, hiccough, peculiar cries, whoops and noises which simulate the cries of animals, contractures and paralyses, aphonia, fainting spells, tremors, rhythmical spasms and convulsions. The convulsions may resemble epilepsy, but the patient as a rule does not fall heavily, nor where much injury can be done, and does not bite the tongue severely. There is a rare form in which the convulsive attacks are very severe and continue for several days.

Mental symptoms. Disturbances of sensation are common and there may be hyperæsthesia or anæsthesia of a small area or of a whole part of the body; hearing is often rendered more acute, or it may be lost, and sight may also be lost; hallucinations may be present; amnesia for certain events and conditions is common; the emotions show great fluctuations and the mood may vary from elation to depression; the disorders of conduct may range from stupor to delirium, and many acts which are extremely dangerous and may result fatally are committed for the purpose of exciting alarm or sympathy.

Nursing procedures. These are among the most trying and difficult patients to nurse, for the mental impairment is so slight, and the lack of self-control, the irritability, the incessant questioning, groundless worries, hesitation and indecision tax the patience and resourcefulness of the nurse to the utmost. The mind is so often alert, and they appear so sensible, that it is difficult at times not to feel that they could be different if they would; and this is where much of the difficulty lies, the lack of power to will. But it must be remembered that in their minds they truly suffer and need careful and intelligent nursing.

When the general condition needs rest and building up, the physician prescribes "**Rest cure**," a form of treatment first employed by Dr. S. Weir Mitchell. This consists of

separation from the family or friends, either at home or in hospital, preferably in hospital, for it has been proved that the absolute obedience which is imposed by the physician is more readily gained when the patient is removed from his accustomed surroundings, which are associated with his illness, and from the family and friends who too often express undue sympathy for the symptoms and unintentionally criticise and interfere with the treatment; absolute rest of body and mind, for the patient is put to bed and is not allowed to have so much as a newspaper or a letter; regular diet at fixed hours with sometimes a diet of milk exclusively for a number of days followed by a sudden, unexpected change to full diet; passive exercise by massage; some form of hydrotherapy, a cold pack or warm bath at bedtime to combat the insomnia; and, in so far as possible, the exclusive service of a special nurse. The duration of this treatment ranges from four to ten weeks depending on the response of the patient. When repose of body and mind is complete, a return to normal activities is gradually made by first sitting up in bed with a back rest, then in a chair for definite periods. At this time the patient is permitted to read a little, to receive a letter, etc. During this period the nurse must be alert to detect the recurrence of old ideas and note carefully the reaction to them.

In the treatment of these disorders very little is left to the decision of the patient in the beginning, for a routine or program which provides for every hour in the day is prescribed by the physician. These orders must be punctually and fully carried out. Many times there is a desire on the part of the patient to compromise some part of it, to revert to the old ways of doing only what was agreeable and convenient, and here the nurse must show no hesitation, no indecision, but demand that the full requirement of the order be met. The nurse who has won the confidence and respect of her patient, and has learned to make simple, direct and positive statements, will not have much difficulty in carrying out the physician's directions.

All unnecessary nursing procedures should be avoided, for many patients have been made worse by the solicitous ministrations of their family, who in their eagerness have tried to appease and satisfy every whim and notion. Listen patiently to all the patient will tell, for to unburden the mind affords great relief, and be sympathetic with the patient but not with the symptoms. Do not ask how he slept or how he feels, but assume that he slept well, that he feels better day by day, that improvement is being made and that recovery is sure to come. A nurse who is genuinely interested and sympathetic, punctual in carrying out the orders prescribed, who is cheerful, patient, yet decisive and firm, hopeful and eager for recovery can do much towards arousing the patient from his unhappy and miserable state and help him to attain to one of hopefulness, interest and usefulness in the future.

As progress is made some forms of **occupation** are given, the planting of seeds, growing of bulbs and plants, sprouting wheat seeds in a sponge, copying, memorizing, the study of birds, bees, trees and flowers, all the various forms of handiwork, simple household tasks, and light gardening, gradually increasing the demand for both physical and mental energy until a normal condition has been attained.

Psychotherapy is largely employed in the treatment of these and other functional disorders of the nervous system. It is the treatment of disease by suggestion which influences the activity of the mind, "buoys up the spirits, sets the blood flowing more freely and the nerves playing their parts without disturbance," so that symptoms are relieved and the general condition is improved. Psychotherapy has also been called "mind cure" and "faith cure." It is the oldest of therapeutic measures. From the beginning of time the belief in gods and goddesses, prayers to images, idols and saints, the waters of sacred springs, charms worn about the neck and carried in the pocket, a prescription and faith in the doctor are all expressions of the healing power which resides in the mind. Dr. Osler has said, "The basis of the

entire profession of medicine is faith in the doctor and his drugs and his methods." Suggestion is a really powerful force in daily life, and the responses depend upon the susceptibility of the person to be influenced, and much harm as well as good can come from it. Many of the abnormal ideas which produce the ills of these psychoneurotic patients have been acquired through suggestion. It is obvious that only qualified physicians should decide that the ailment is one to be treated by this method, for while it may be claimed that

"Of all the ills that suffering man endures
The largest fraction liberal Nature cures,"

such aids and agents must be prescribed as will permit nature to assert its power; that tuberculosis, for instance, cannot be cured by suggestion alone, but certain paralyses and other disorders which are of purely mental origin may quickly yield to this treatment.

The methods employed vary with the physician, but in nearly all cases after the patient has freely and fully described his symptoms, mental and physical, and has unfolded the experiences in his life which he thinks may contribute to his present condition, answering all questions truthfully, the physician makes certain emphatic, positive statements or suggestions to him, some of which he is to keep in the focus of attention. These suggestions are repeated many times, and gradually by a process of re-education and training better control of the emotions is gained, and the power to will is increased and strengthened.

Hypnotism is another form of treatment in which suggestion is used. The patient is put to sleep, and while in this state of somnolence, suggestions are made to him which are remembered on awaking and become active in his mind and control his activity. Some remarkable cures of alcoholism, drug addiction, vicious habits and stammering have resulted from treatment by hypnosis.

Psychoanalysis is a form of therapy which many physi-

cians now use in the treatment of the functional disorders of the nervous system. This is a method of treatment described by Sigmund Freud, a physician of Vienna, and is based on the theory that the symptoms are produced by complexes long hidden or buried in sub-consciousness which break through and temporarily dominate the mind. Experiences arising out of conditions and situations in life which are intolerable and cannot be endured or reconciled are gotten rid of either by fixing the attention on other things, or by pushing them far back in consciousness and forgetting them. The emotion which accompanies the experience becomes detached and is fixed on some other idea which has absolutely no connection with the experience. In this way mental symptoms are converted into physical ones. Special emphasis is laid upon the sexual repressions, which are regarded as the greatest of all repressions, and preëminent in the cause of hysteria.

The method of procedure is to go over the entire life history of the patient carefully, eliciting the hidden and forgotten experiences. These are analyzed and deductions drawn by a technique which assumes that psychical events like physical events possess an unchanging sequence of cause and effect. Dreams, too, are carefully analyzed, for in them are often expressed repressed desires, emotional experiences and mental conflicts which the patient did not know formed any part of the content of his mind.

While psychotherapy and psychoanalysis are forms of treatment administered by the physician, there are quite definite nursing procedures to be carried out, for to the nurse is given the task of supplementing his efforts. The treatment is usually briefly outlined so that she may the more intelligently carry out the special orders, make more accurate observations, secure fuller coöperation and thereby insure the obtaining of better results from the patient. A physician's efforts may be nullified by a nurse who does not know or understand the principles of treatment.

MENTAL DEFICIENCY

This is a condition where from birth, or through accident or disease at an early age there is a lack of normal development of the mind, in consequence of which the individual is incapable of performing his duties as a member of society in the position in which he is born. **Feeble-mindedness**, as it is commonly called, is a permanent condition and cannot be cured, but a good deal can be done in many cases to improve, or at any rate, make the most of what mentality there is.

Certain **physical deformities** or “**stigmata**” are common in these conditions, — the shape of the skull, the shape and position of the ears, the shape of the palate, deformities of the nose, irregularities of the teeth, differences in the length of the arms and legs, etc. At one time these were considered important in diagnosis, but to-day psychological tests are given and the diagnosis is made on the results of these tests.

Two French investigators, Alfred Binet, a psychologist, and Theodore Simon, a physician, studied a large number of children and formulated tests which could be correctly passed by those of average intelligence at the different age periods from the first to the sixteenth year, the latter being made the adult level. They recognized that in conditions of mental weakness the amount of intelligence which was or could be manifested should be the measure to determine the degree of deficiency. These tests are known as the “**Binet-Simon Intelligence Tests**,” and are designed to show not only the degree of defect, but also which of the mental faculties are chiefly involved.

Nurses in the industries, in schools and social service are more and more being called upon to make application of these tests in their work. A form of the tests is given in the following pages, but this work should only be undertaken after special training for it has been gained, preferably by instruction by a psychologist or other qualified teacher.

BINET-SIMON TESTS FOR INTELLIGENCE AGE

(Form arranged for the Johns Hopkins Dispensary.)

Mentality of One and Two Years

1. Eye follows light.
2. Block placed in hand is grasped and handled.
3. Suspended cylinder is grasped when seen.
4. Candy is chosen instead of block.
5. Paper is removed from candy before eating, child having seen the wrapping.
6. Child executes simple commands, and imitates simple movements.

Mentality of Three Years

7. Touches nose, eyes, mouth, and pictures of these as directed.
8. Repeats easy sentences of six syllables, with no error.
9. Repeats two numerals.
10. Enumerates familiar objects in pictures.
11. Gives family name.

Mentality of Four Years

12. Knows own sex.
13. Recognizes key, knife, penny.
14. Repeats three numerals in order, when heard once.
15. Tells which is longer of lines differing by a centimeter.

Mentality of Five Years

16. Discriminates weights of 3 and 12 grams, 6 and 15 grams.
17. Draws, after copy, a square that can be recognized as such.
18. Repeats "His name is John. He is a very good boy," and similar sentences.
19. Counts four pennies.
20. Rearranges a rectangular card that has been cut diagonally into two triangles.

Mentality of Six Years

21. Knows whether it is forenoon or afternoon.
22. Defines, in terms of use, the words fork, table, chair, horse, mamma, three satisfactorily.
23. Performs three commissions given simultaneously.
24. Shows right hand, left ear.

25. Distinguishes pretty from distinctly ugly or deformed faces, in pictures.

Mentality of Seven Years

- 26. Counts 13 pennies.
- 27. Describes pictures shown previously in No. 10.
- 28. Notes omission of eyes, nose, mouth, or arms, from as many portraits, three of the four.
- 29. Draws diamond shape, from copy, so that it can be recognized.
- 30. Names red, green, blue, yellow.

Mentality of Eight Years

- 31. States difference between paper and cloth, butterfly and fly, wood and glass, in two minutes, two satisfactorily.
- 32. Counts from 20 to 1 in twenty seconds, with not more than one error.
- 33. Names days of the week in order, in ten seconds.
- 34. Counts values of six stamps, three ones and three twos, in less than fifteen seconds.
- 35. Repeats five numerals in order, when pronounced once.

Mentality of Nine Years

- 36. Gives correct change from a quarter paid for an article costing four cents.
- 37. Defines in terms superior to statements of use, in No. 22.
- 38. Names the day, month, day of month, year, allowing error of three days either way on day of month.
- 39. Names the months in order, allowing one omission or inversion, in fifteen seconds.
- 40. Arranges, in order of weight, boxes of same size and appearance weighing 6, 9, 12, 15 and 18 grams, in three minutes. Two out of three trials.

Mentality of Ten Years

- 41. Names a penny, nickel, dime, quarter, half dollar, two, five and ten-dollar bills, in forty seconds.
- 42. Copies design after ten seconds' exposure.
- 43. Repeats six numerals.
- 44. Tells what one should do in various emergencies, and answers questions difficult of comprehension.
- 45. Uses three given words in two sentences.

Mentality of Eleven Years

46. Detects nonsense in three out of five statements, in about two minutes.
47. Uses three given words in one sentence.
48. Gives at least sixty words in three minutes.
49. Names three words that rhyme with *way* in one minute.
50. Rearranges shuffled words of 8-word sentences, two out of three, with one minute for each.

Mentality of Twelve Years

51. Repeats seven numerals in order, when heard once.
52. Defines charity, justice, goodness, two satisfactorily.
53. Repeats, with no error, sentence of 23-26 syllables.
54. Resists suggestion as to length of line.
55. Infers correctly the fact indicated by circumstances given, in each of two trials.

Mentality of Fifteen Years

56. *Interprets* pictures shown in Nos. 10 and 27.
57. Imagines clock-hands interchanged for hour 12.20 and for hour 2.56, telling the time.
58. Writes "Caught a spy" in symbols after learning code, one error permitted.
59. Writes correctly the opposite of seventeen out of twenty given words.

Mentality of an Adult ("Over 15 Years")

60. Imagines and draws results of cutting triangle from side of twice folded paper.
61. Imagines and draws new form produced by joining the transposed pieces of diagonally divided rectangular card.
62. Distinguishes between abstract terms of similar sound and meaning (evolution — revolution, event — prevent, etc.).
63. Gives three differences between the president of a republic and a king.
64. Gives the central thought of a selection read to him.

NOTE. This statement of the tests, prepared by Dr. E. B. Huey, utilizes Dr. Goddard's revision of 1911, and is used by permission of the Johns Hopkins Hospital and Dr. Goddard. Directions for making the tests are given in Dr. Huey's Syllabus for the Clinical Examination of Children and in Dr. Goddard's The Binet-Simon Measuring Scale. The Syllabus and blanks are obtainable from the publisher, Warwick & York, Baltimore, Md.

The following **classification** has been adopted by students of mental deficiency: The term **idiot** is used to designate an individual who has the intelligence of a normal child of three years or under; **imbecile**, one who has the intelligence of a child three to seven years inclusive; and **moron**, one who has the intelligence of a child eight to twelve years of age.

In **idiocy**, the lowest grade of defect, many patients are as helpless as infants, for they do not attempt to move or to speak, do not make their wants known, eat when food is placed in the mouth and live a purely vegetative existence. They are extremely dull and stupid, and the attention cannot be attracted by the ordinary stimulation of the sense organs. They may hear, but they do not understand, and they may see, but do not perceive. In some others the attention may be gained by very strong stimuli and simple reactions may be evoked. In these cases the nurses are able by persistent, continuous effort to bring about a semblance to regular habits. Some may be taught to make their simple wants known and to feed themselves, but many never learn to move or to speak. A few, however, who have learned to get about may be in almost constant motion.

Cretinism is a form of mental deficiency which is due to diminished function of the thyroid gland (hypothyroidism), a condition which is caused by congenital defect, faulty development or impairment of the gland by disease. The symptoms may appear as early as the first year. Cretins are very dwarfed; the fingers and toes are stumpy; the skin is dry, dark and thick; the head is very large, often huge, and the forehead low; the lips are thick, the mouth is open and the teeth appear very late; the hair is dry and coarse; and the abdomen is usually very large. The mental faculties are in abeyance or are very much retarded, and all instinctive tendencies are very late in appearing, for instead of trying to walk at the twelfth or thirteenth month, no attempt is made until the fifth or sixth year. This condition improves markedly when thyroid extract is given,

and some children become almost normal. The treatment, however, must be continued throughout life.

In the other grades of deficiency there is much irregularity in the mental development. The treatment is directed towards maintaining the general health and developing the mental powers by education. In the best institutions for the feeble-minded the school is the fundamentally important part of the treatment, and simple, direct methods of instruction which make use of objects and play as in the kindergarten, are employed, for although many of the patients are men and women in actual age and stature, they are mentally of sub-primary age. They are very slow to learn, for attention is so weak it can be fixed for only brief periods, and frequent changes are necessary to attract it. Some are taught to read and write and to make the simplest calculations, but arithmetic which involves the higher processes of reasoning is usually too difficult for them to grasp and only the simplest principles are acquired. Some may learn to play musical instruments, and instruction in music is provided. The elementary education, however, cannot proceed further than the limit of the mental capacity, and this fact should be kept in mind constantly and results which are beyond the powers of the patient must not be expected.

A very large number can be taught to do some form of **manual or industrial work** in spite of the fact that in the beginning they have so little power of initiative and imitation, and the attention and power of application are so weak, that they have to be directed and guided at every step. The work is likely to be poorly done, but by patient, persistent training and supervision it can be creditably performed. The coarser forms of work, stringing spools, buttons and beads, spool and rake knitting and paper weaving may be as much as some can be taught to do; while others may learn the various household occupations, washing, ironing, washing dishes, sweeping, dusting, bedmaking, cooking and serving food, sewing, embroidery, crochet, knitting, lacemaking and

dressmaking. The men who have least mentality are taught to do the monotonous forms of work, sawing wood, polishing floors, mowing grass, etc. Others are employed with farm and garden work, broom and shoe making, mending and repairing furniture and other forms of carpentry, house painting, etc. All these patients are happiest when occupied. They are not, however, able to work as long or accomplish as much as the average child whose intellectual level is the same. Many are handicapped by imperfect physical development and the occupation must be carefully chosen. Constant encouragement must be given, and the interest in the work must be kept up by rewards and competition.

Various forms of **athletic exercises**, military drill, marches, games carried out to music and dancing are provided. Entertainments and exhibitions are also frequently given for the incentive to work must be urgent.

Psychoses sometimes develop in those who are feeble-minded and these may be characterized by irritability, excitement, depression, ideas of persecution and hallucinations.

The control and prevention of mental deficiency is one of the great problems of mental hygiene, for statistics show that tramps, criminals, wayward girls, paupers and the very large dependent class are to a more or less degree mentally deficient. Irrefutable proof has already been given that of all classes of defectives those with mental enfeeblement most surely transmit the defect. Dr. Goddard's study of the Kallikak family¹ showing that from an illicit union of a Revolutionary soldier and a feeble-minded girl in 1776, there were in 1912, 480 direct descendants, of whom 36 were illegitimate, 33 sexually immoral, 24 confirmed alcoholics, 8 who kept houses of prostitution, 143 feeble-minded and many others whose mentality was doubtful, is evidence enough that this group of unfortunates must be segregated if the problem is ever to be solved.

¹ "The Kallikak Family," H. H. Goddard, Ph.D.

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CHAPTER XIII

HYDROTHERAPY

Hydrotherapy — the treatment of disease by means of water — is very largely employed as a therapeutic measure in nervous and mental diseases. Water has long been valued as a nerve stimulant, sedative and general tonic. It is given internally, and applied externally in many forms, — baths, sprays, ablutions, affusions, packs and douches. It is applied at temperatures ranging from hot to cold, and under pressure. The application of water which is of the same temperature as the skin (about 90° F.) produces no effect. It must be several degrees colder or warmer to produce a therapeutic action, and this is directly dependent upon the difference in temperature.

When first applied to the surface of the body, cold produces a blanching of the skin. This is a reflex action, — the sensory nerves of cold are stimulated, the impulse is conducted to the vasomotor centre where it in turn stimulates the vasoconstrictor nerves which contract the muscles in the walls of the arteries, thereby diminishing their size and decreasing the amount of blood in the capillaries. This raises the blood pressure, makes the heart beat stronger and increases the amount of blood in the deeper structures. The respirations at first are gasping, but soon become more prolonged and deeper. When the cold is removed the blood vessels dilate and quickly fill with blood (vasodilatation) — an action which takes place when the inhibitory control of the vasoconstrictor nerves is diminished. The skin becomes red and glowing, and there is a pleasurable sensation of warmth, which induces calmness and a feeling of well-being. This is termed the **reaction**, and is evidence that

active circulation has been restored. The degree of cold and the duration of its application must be determined by the ability of the patient to react. Some persons cannot react, and general treatments should not be given. When there is prolonged shivering, chattering of the teeth, cyanosis of the lips, and a weak, thin pulse, the treatment is not well taken, and heat and friction must be applied at once to bring about a reaction, for a dangerous congestion of the viscera may result.

Heat is one of the most powerful stimulants, but it may become a depressant if its action is too much prolonged. When applied to the skin the first effect is a constriction of the cutaneous vessels and a diminished supply of blood in the capillaries, but this is rapidly followed by vasodilatation with reddening of the skin and a lowering of the blood pressure, — a condition which persists as long as the heat is applied. It also has valuable sedative action. The dilatation of the cutaneous vessels diminishes the supply of blood in the brain and other organs and deep structures, nervous and muscular energy are decreased, and a feeling of languor is produced. When its application is prolonged, the excretory glands of the skin are stimulated, perspiration is induced, the body temperature is elevated, the heart action becomes more rapid and the respirations are increased. If the treatment is too long continued collapse may follow.

Water under pressure is applied by means of hose and nozzle, and the effect of the forcible impact against the muscles and tissues is similar to that of massage. Water applied in this manner is a strong stimulant, an eliminative and a sedative.

Douche treatment. Many hospitals have a department of hydrotherapy under the direct supervision of nurses who have received special training in this branch of therapy. It usually consists of a dressing-room in which are located the hot air and electric light cabinets, a wet room which is equipped with a control table, shower and sitz baths, and a quiet room provided with cots or tables where the after

treatments and massage may be given. From the control table the operator regulates the temperature and the pressure of the water, and also the form in which it is applied. Some of the more common forms are: Jet douche, in which a small stream is directed under pressure; circular douche, in which the water strikes at an angle and the patient turns slowly around; the Scotch douche, in which hot and cold water are alternately applied; the rain douche, in which the stream is directed from above; and the fan douche produced by placing the finger over the outlet of the nozzle.

The form of treatment and the duration are usually prescribed by the physician. Before the treatment begins the pulse and blood pressure, both systolic and diastolic, are taken and recorded on the hydriatic chart. The patient is then undressed and placed in the cabinet to become thoroughly warmed; ice compresses are applied to the head, water is given freely to drink and the pulse is taken frequently. After about five minutes, or when perspiration begins, the patient is removed, wrapped in a sheet and quickly placed in position for the douche treatment. This usually consists of:

Circular douche (C. D.)	2 minutes	105° F. to 90° F.	at 20 pounds.
Jet douche (J. D.)	1 minute	100° F. to 80° F.	at 20 pounds.
Scotch douche (S. D.)	20 seconds	105° F. to 80° F.	at 20 pounds.
Fan douche (F. D.)	10 seconds	65° F.	

The minimum temperatures are reduced one degree or more daily until 60° F. to 55° F. has been reached. The pressure may be started at ten pounds and increased gradually to twenty pounds or until the maximum which the patient can stand has been reached.

The patient is dried, using rough towels and friction, wrapped in a sheet or blanket, and allowed to rest. The pulse and blood pressure are again taken and recorded. The reaction is also recorded on the chart.

Ablution is one of the simplest forms in which water may be applied. Have ready a rubber sheet, two bath blankets, towels and basin of water at a temperature of 50° to 60° F.

Remove the bedclothes and cover the patient with a bath blanket; slip the rubber sheet covered with a bath blanket under the patient, to protect the bed; remove the gown; expose a part of the body, and apply the water from the hollow of the hand, or by means of a bath mit; rub vigorously for one or two minutes, applying more water as needed, and dry with a coarse towel. Repeat this procedure until the whole body has been gone over systematically. This treatment is given for insomnia, and will usually bring about quiet, restful sleep.

Affusion. The patient sits or stands in a bath tub. A sheet is placed around the body under the arms, and water at a temperature of 50° to 60° F. is poured from a pitcher for fifteen to twenty seconds. The patient is then rubbed with coarse towels until reaction is obtained.

This treatment may also be given to a patient in bed. The upper covers are removed and the patient covered with a blanket and the gown removed. The mattress is protected with a large rubber sheet of sufficient length to form a drain at the foot, or two smaller rubber sheets may be used by overlapping their edges. The side edges of the sheet are rolled to prevent the water from draining on to the floor, and the edges of the lower end are rolled to form a drain through which the water will flow into a pail or foot tub placed at the foot of the bed. A sheet folded lengthwise, dipped in water 50° to 60° F., is then slipped under and folded about the patient. The head of the bed is elevated and water at a temperature of 50° to 60° F. is then poured over the patient from a pitcher, beginning at the left ankle going up the side to the shoulder, across the chest and down the right side. Friction may be given over the sheet and more water applied. The patient may be dried at once with coarse towels, or may be covered with a bath blanket and allowed to remain in the sheet for ten minutes.

Baths may be given locally, full tub, half tub or continuously. For a cold bath or plunge the tub should be filled two thirds with water at 60° F. The patient is im-

mersed and rapid friction given. This treatment lasts ten to twenty seconds. Reaction should promptly take place. This treatment is a strong tonic and is usually given in the morning.

In a **half bath** the tub is filled about one third or one half with water, a sufficient amount to cover the extended limbs and pelvis. The temperature should be 60° to 65° F. The patient sits in the bath while the nurse splashes the water over the body and gives friction. The patient may also assist in the rubbing. A bath mit or brush may be used in giving friction. This treatment may last from one to ten minutes, depending on the condition of the patient.

Cold foot baths are sometimes given when the circulation is sluggish and in cases of insomnia and neurasthenia. The feet are placed in a tub of water 50° to 60° F. and vigorously rubbed and dried with coarse towels.

A **prolonged warm bath** is often given to relieve fatigue, reduce nervous tension and induce sleep. The tub is filled two thirds with water at 90° to 100° F. The patient should recline and be encouraged to relax. The treatment may continue for twenty minutes. When ready to be taken out, a cool spray or sponge may be given, after which the patient is rubbed dry, gowned, wrapped in a blanket, placed in bed and given a warm drink. The room must be quiet and well ventilated, the lights turned low and conversation should not be permitted.

The **continuous bath** is largely employed in the treatment of delirium and the excitement of mania. Some tubs are so constructed that there is a continuous inflow of water at a constant temperature, but this treatment can be given in an ordinary bath tub, and the temperature of the water can be maintained by the addition of hot water from time to time. A hammock or canvas straps are adjusted in the tub so the patient can recline and the whole body be immersed in the water. Sometimes the hammock is of coarse material, and a mattress protector or sheet should be placed over it and securely fastened or pinned to it to prevent its slipping.

The tub is then filled with water about 98° F. or lower as prescribed by the physician. The patient is lightly rubbed with lanolin, especially the heels, soles of the feet and palms of the hands; a gown is put on, or if the patient is very restless pajamas are better; cotton is placed in the ears to exclude the water; a bathing cap may be put on to protect the hair; a rubber ring encased in a pillow slip is placed under the head; the feet are elevated to keep them as much as possible out of the water, and the tub is covered with a rubber sheet and a small spread or sheet which are neatly folded about the tub and pinned in place; water is given freely to drink, and the patient should never be left alone. A bath thermometer should always be kept in the tub and the temperature of the water frequently read, even where the control is automatic, for thermostats are not always to be depended upon. The pulse is taken often, and charted. The patient remains in the tub usually about eight or nine hours, but some cases are kept in for twenty-four hours. When taken out a cleansing bath is given, the body is thoroughly dried and rubbed with alcohol, and the patient is placed in a warm bed. This treatment in many cases does away with the necessity for giving sedatives and hypnotics, for the patient invariably becomes less restless and many times quiet and drowsy, and refreshing sleep usually follows.

The Brand bath receives its name from Dr. Brand, who first advocated its use and demonstrated its value. It is largely employed in typhoid fever and other febrile disorders. When it is used a temperature of 102.5° or 103° F. is usually an indication for the bath. The procedure is: A portable tub two thirds filled with water at a temperature of 70° to 85° F. as prescribed by the physician is placed alongside the bed. A hammock or other means of support is placed in the tub. The patient is covered with a sheet, the gown is removed, cotton is placed in the ears and she is then lifted from the bed and gradually lowered into the tub, until the shoulders, chest and whole body are immersed.

A rubber ring or pillow is placed under the head, and cold compresses are applied. As soon as the bath begins, friction to all parts except the abdomen should be given and continued throughout the treatment. The rubbing should follow the venous circulation — always towards the heart. Some patients are not able at first to stand a low temperature, so the water may be started at 90° F. and gradually reduced by the addition of ice. The duration of the treatment is from ten to twenty minutes. The pulse is taken occasionally, and more frequently if there is cyanosis. At first it becomes hard and small, due to the increase in arterial pressure; the respirations are gasping, and muscular tremors are usually present. If at any time the pulse becomes weak, rapid or irregular the treatment must be terminated at once, and stimulation by heat and friction given. The bed is made ready to receive the patient by spreading a rubber sheet over it and covering with a bath blanket. In some cases the bath blanket is omitted. At the end of the bath a dry sheet is placed over the tub, and as the patient is lifted from the bath she is wrapped in it, the wet sheet having been withdrawn, placed in bed and the bath blanket folded about the body. At the expiration of ten or twenty minutes the sheet is removed and the skin is dried if necessary; the bed is remade, and the temperature is then taken. If reaction does not set in after the patient is placed in bed, the friction should be continued and hot water bags should be applied to the extremities. The effects of this treatment are many. The temperature may show a drop of one or more degrees, the mental symptoms are often much relieved, the pulse is slowed and the heart action is stronger, more oxygen is inhaled and CO₂ is exhaled (some authorities state as high as three times the normal amount) and the activity of the kidneys and skin is increased.

Sitz baths are given locally to the pelvis, in a tub of special construction. Depending upon the action desired these may be hot, cold, neutral or prolonged. A blanket is placed about the patient and pinned at the back of the

neck; she is then seated in the tub, and the feet placed in a foot bath at a temperature of 105° to 110° F. The upper edge of the blanket is brought up around the shoulders and over the edge of the tub, and the lower edge covers the foot bath. A folded towel is placed at the back of the tub to protect the patient from contact with it, and another is placed over the front under the knees. Care must be taken to avoid pressure on the popliteal space.

In the **cold sitz bath** the patient sits erect in the tub, the feet in the foot bath; the edges of the blanket are separated and placed on the shoulders; water is dipped from the tub and applied with friction to the back, the patient at the same time giving friction to the abdomen. Bath mits may be used for the rubbing. When a hot sitz bath is given, the temperature is gradually raised to the prescribed degree, an ice bag or iced compresses are placed on the head, and the water in the foot bath should always be several degrees higher than the temperature of the bath.

Drip or rub sheet bath. The patient stands in a tub in which water at 105° F. covers the ankles. The nurse takes the upper corner of the sheet in the left hand while the right hand gathers up the border of the sheet from left to right into folds, then dips it into the water and when saturated applies it as follows: The patient raises both arms, the nurse holds the left corner under the right axilla and draws the sheet across the chest; the arms are lowered to the sides, the sheet is carried well up over the shoulders and encircles the neck, and the corner is tucked in to prevent slipping; the lower border is wrapped about the legs. Water at a temperature of 65° to 75° F. is dashed on the chest and back; the nurse standing at the side gives vigorous friction and slapping to the back and chest at the same time; the sides and the arms and legs are treated in like manner. The sheet is then withdrawn, the patient steps out of the tub on to a bath rug, is thoroughly dried and rubbed briskly with warm towels. This treatment is used in neurasthenia and to relieve insomnia.

The salt glow is a vigorous circulatory stimulant. Inasmuch as no great amount of cold water is applied to the body it does not require as great reactive power as other cold treatments. Its general effect is tonic and sedative. About two pounds of coarse salt are moistened with cold water and allowed to stand for a short time. The treatment should be given in a wet room or bath tub. A towel is pinned about the waist and the patient stands in a tub in which water at 105° F. covers the ankles. Each section of the body as it is treated is moistened with water from the tub, or the entire body surface may be moistened by immersion or spray at a temperature of 100° to 105° F. Standing in front of the patient, take a small amount of the wet salt in each hand, spread it evenly over the neck and chest, give vigorous alternate circular friction of the neck and cross-stroking to the chest, until the skin is in a glow; next give circular friction to the sides of the chest and cross stroking to the abdomen; with one hand on each side of the left arm give circular friction, and follow the same procedure with the right arm and the legs; stepping behind the patient, give circular friction to the hips, alternate circular friction to the back of the neck, cross-stroking to the shoulders, to and fro friction to the back, and finish with longitudinal stroking to the spine. The salt should be thoroughly washed off by means of water poured from a pail, or by shower or general spray. Dry the patient with towels or by wrapping in a sheet as after any general wet treatment.

AVERAGE TEMPERATURES OF BATHS

Douche	Cold	50° to 70° F.	average 60° F.
	Neutral	92° to 97° F.	average 95° F.
	Hot	104° to 125° F.	average 112° F.
Affusion	Cold	55° to 65° F.	average 60° F.
	Cool	70° to 80° F.	average 75° F.
	Hot	104° to 120° F.	average 112° F.

Plunge	Cold	50° to 70° F.	average 60° F.
Immersion	Cold	50° to 70° F.	average 60° F.
	Cool	70° to 90° F.	average 80° F.
	Neutral	92° to 97° F.	average 95° F.
	Hot	100° to 106° F.	average 102° F.
	Very hot	104° to 116° F.	average 110° F.
Foot bath	Cold	45° to 65° F.	average 55° F.
	Hot	105° to 120° F.	average 110° F.
Sitz bath	Cold	55° to 75° F.	average 60° F.
	Neutral	92° to 97° F.	average 95° F.
	Hot	106° to 120° F.	average 112° F.
Electric light full cabinet bath, tonic,			110° to 120° F.
			average 115° F.
Electric light full cabinet bath, eliminative,			120° to 175° F.
			average 160° F.
Hot air bath excluding the head,			110° to 180° F.
			average 160° F.

Packs may be given dry or wet, hot or cold. A **cold pack** for relieving insomnia is given in the following manner : Have ready one rubber sheet, two bath blankets, one long sheet, towels, hot water bag with covers and ice cap or compresses. The sheet is pleated lengthwise and folded, as in this form it is more easily placed under the patient. It is placed in a tub of water at 60° F. until thoroughly wet and then wrung out. Remove the bedclothes and cover the patient with a bath blanket; remove the gown; turn on side and slip under the rubber sheet covered with the bath blanket; then the wet sheet is slipped under, so that more than half the width is on the far side; the patient is then turned on the back and packed in the wet sheet, in this order: Fold the sheet back at the bottom to about the ankles; fold the narrow side over the body under the arms and tuck in smoothly between the legs; place the arms at the side and bring the far side of the sheet across and smoothly tuck about the shoulders and under the back, taking care to have no uncomfortable ridges to make pressure, and that

no two parts of the body are in contact; the feet are wrapped in a dry towel and the hot water bag applied; the ice bag or compresses are applied to the head, and a bath blanket placed over the patient. If compresses are used they should be changed frequently. Turn the lights low, do not permit conversation, and keep as quiet as possible. At the expiration of the time prescribed (twenty to thirty minutes) remove the pack, dry, rub with alcohol, put on fresh gown, replace covers, give hot drink and provide fresh air without draughts. All preparations for the treatment should be made outside the patient's room and every detail must be systematically and quietly carried out.

In cases of delirium and mania a cold pack is often prescribed, and because of the marked restlessness, further measures are necessary to keep the patient in the sheet. This is usually accomplished by the use of blankets and very large safety pins. The procedure is the same as for the cold pack, only two or three heavy blankets in addition are placed under the patient. Plenty of help should always be summoned in order that the treatment may be given without struggling. After being packed in the sheet, the blankets are, one at a time, securely wrapped about the patient, and the outside one is pinned. Care must be taken to place the pins where there is little or no pressure, and not on the shoulders, hips or back. The application of strap sheets across the knees and hips may be indicated if the restlessness continues, for this treatment is given for its sedative action, and it is necessary to help the patient to become quiet. The bed is then covered with a spread; an ice cap or compresses are applied to the head, and cold water is given freely to drink. The patient must be carefully observed. The pulse which at first is rapid, becomes slower and stronger when perspiration begins, the mental activity is diminished and the patient becomes quiet, drowsy and oftentimes goes to sleep. If the face becomes much flushed and the pulse is weak and irregular, the treatment must be terminated at once. The duration of this treatment may

be from twenty minutes to an hour or more, depending upon the condition of the patient. When removed from the pack the patient is given a shower or sponge bath, thoroughly dried, rubbed with alcohol and placed in bed.

A **dry pack** is often prescribed in cases of shock, collapse and subnormal temperature. It is given in the same manner as the cold pack, except that the sheet is not wet and the feet are wrapped in it. This treatment is given to secure an increase of heat by lessening heat elimination, and the effect may be hastened by the application of hot water bags, extra blankets and giving hot drinks.

A **hot pack** is given by means of a blanket which is wrung out of water at a temperature of 130° to 145° F. and applied when about 105° to 110° F. Care must be taken not to apply it when too hot, and also not too cool. This is wrapped about the patient and a dry blanket is used for a cover. The feet are wrapped in a dry towel and a hot water bag placed to them. Cold is applied to the head. This treatment may continue twenty to thirty minutes. The patient is then taken out, care being exercised to avoid chilling, rubbed with alcohol and made comfortable in bed. As heat applied for a long time tends to depress the heart, the pulse must be taken frequently. This treatment is given to increase elimination and to relieve convulsions and the spasms of chorea.

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